

The storebox Package

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CTAN: <http://www.ctan.org/pkg/storebox>

VC: https://bitbucket.org/martin_scharrer/storebox

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Abstract

This package allows the placement of identical content multiple times in a document while only storing it once in the output file. At the moment only \LaTeX compilers with native PDF output are supported (`pdflatex` or `lualatex`). For other \LaTeX compilers a fallback to `\savebox` is implemented.

1 Introduction

\LaTeX provides box registers to save content and use it later in the document once or multiple times (or none at all). However, the box content is then written every time to the output file. The PDF file format provides a way to store material as object and reference it later. A similar technique is theoretically possible for PostScript output (but not yet implemented). This has the benefit that the content is really only stored once in the output file. However, if file compression is used for the final output file the size benefit might be very small if the content is only reused a low number of times.

This package provides “store boxes” which have the same user interface like normal \LaTeX “save boxes”, but only store the content once in the output file even if it is used several times. At the moment only PDF output is supported (i.e. `pdflatex` and `lualatex`). If the stored content is not used in the document after all it is not written to the PDF except if the `immediate` option was used. For any other \TeX and output format the package simply falls back to use the normal `savebox` equivalents.

2 Known issues

There are some known side effects with advanced graphic elements, namely transparencies and shadings. These elements require special driver code which adds the required PDF instructions. For TikZ/PGF drawings this is done by the `pdftex` driver of TikZ/PGF. However, due to a [bug in this driver](#) transparent material is not supported, but shown fully opaque if the storebox also holds PDF shadings. This affects `pgfsys-pdftex.def` in v1.26 from 2009/05/22 and earlier versions. Since `storebox` v1.3 from 2011/12/20 a set of patches for the PGF `pdftex` driver is loaded (as support package `storebox-pgf`), so that both transparencies and shadings are

supported together. The patches are not loaded if a new version of the driver is detected. Please report all issues with this patches to the `storebox` author, not to the TikZ/PGF authors.

3 Options

The package allows to enable and disable the storebox feature. Normally this is selected automatically dependent if PDF output is used (using `ifpdf`). It also provides two options `enable` and `disable` to explicitly switch the storebox feature on or off. The `disable` option is useful to see the resulting file size difference. The usage of the `enable` option should not be required and will lead to errors if used with unsupported TeX formats.

Two further complementary options `delayed` (default) and `immediate` are provided. They control if a storebox (i.e. the underlying `\pdfxform`) is written to the PDF immediately or only after it gets referenced, i.e. is inserted into the document using `\usestorebox`. With `immediate` the storebox is always written into the PDF, even if it is not used. By default `delayed` is used, but it is possible that `immediate` is required if `\storebox` is used inside other `\pdfxform`'s, e.g. inside certain TikZ/PGF nodes. If any graphic issues occur in a document the `immediate` option should first be tested before sending any bug reports.

4 Macros

```
\newstorebox{\<boxname>}
```

Because storeboxes are stored as PDF objects and not as TeX box registers it is not required to allocate a register for them. However, in fall-back mode the used control sequence `\<boxname>` must be defined as savebox. This macro defines `\<boxname>` simply as `\relax` (just as precaution) and is equal to `\newsavebox` in fall-back mode.

```
\storebox{\<boxname>}{\<content>}
```

This stores the `\<content>` as `\<boxname>` (which is actually just a numeric reference) for later use. The `collectbox` package is used to collect the `\<content>` as box and not as macro argument and therefore it can contain verbatim and other special material. The braces can also be written in their explicit form `\bgroup` and `\egroup` and then split in two different macros or across the begin and end of an environment. It is possible to use `\storebox` multiple times with the same `\<boxname>`. This will create a new PDF object without affected the old one. In fall-back mode this macro is functional equal to `\savebox` (but then still uses `collectbox`).

```
\begin{storebox}{\<boxname>}\<content\end{storebox}
```

This is the environment version of `\storebox`. Special care is taken to allow for an identical name. In fall-back mode this macro is equal to the `lrbox` environment.

```
\usestorebox{\boxname}
```

This macro typesets the stored content at the current position (as horizontal box in horizontal mode). This is realized by adding a PDF reference to the stored content. In fall-back mode this macro is equal to `\usebox`.

```
\ifstorebox
```

This if-switch is set to *true* if `\storebox` was successfully defined as intended but to *false* if the `\savebox` fall-back was used.

5 Example

```
\documentclass{article}

\usepackage{storebox}

\newstorebox{\mybox} % Not really required for PDF /
    output
\begin{document}

\storebox{\mybox}{\verb+Supports verbatim ##\empty+}

\usestorebox{\mybox}
\usestorebox{\mybox}

\storebox\mybox\bgroup
Can also be split
\verb+\empty+
\egroup

\usestorebox{\mybox}
\usestorebox{\mybox}

\begin{storebox}{\mybox}
    Or used as environment
    (then will ignore leading and trailing spaces)
\end{storebox}

\usestorebox{\mybox}
\usestorebox{\mybox}

\end{document}
```

6 Implementation

```
1  %<! COPYRIGHT>
2  \ProvidesPackage{storebox}[%
3  %<! DATE>
4  %<! VERSION>
5  %<*DRIVER>
6      2099/01/01 develop
7  %</DRIVER>
8      Store and reuse boxes in a file size efficient \
9      way]

10 \DeclareOption{disable}{\let\ifstorebox\iffalse}
11 \DeclareOption{enable}{\let\ifstorebox\iftrue}
12 \DeclareOption{immediate}{\let\storebox@\immediate\/
13     immediate}
14 \DeclareOption{delayed}{\let\storebox@\immediate\relax\
15     }
16 \ExecuteOptions{delayed}
17 \ProcessOptions*
18 \expandafter\ifx\csname ifstorebox\endcsname\relax
19     \RequirePackage{ifpdf}
20     \expandafter\let\csname ifstorebox\expandafter\/
21         endcsname\csname ifpdf\endcsname
22 \fi
23
24 \RequirePackage{collectbox}[2011/08/04]
```

\storebox

```
20 \newcommand*\storebox{%
21     \begingroup
22         \def\@tempa{storebox}%
23         \ifx\@currenvir\@tempa
24             \endgroup
25             \expandafter\@storebox@\env
26         \else
27             \endgroup
28             \expandafter\@storebox
29     \fi
30 }

31 \ifstorebox
```

\@storebox

Macro version:

```

32 \def\@storebox#1{%
33   \begingroup
34     \collectbox{\collectedbox}{%
35       \storebox{immediate}{pdfxform resources}{\the\%
36         pdfpageresources}\collectedbox
37     \endgroup\mathchardef#1=\pdflastxform
38   }%
39 }

```

\@storebox@env

Environment version. Code adapted from `lrbox` environment. The group added by `\begin` and `\end` must be specially handled to allow for a local assignment.

```

39 \def\@storebox@env#1{%
40   \edef\@tempa{%
41     \setbox\collectedbox\hbox\bgroup%
42       \def\noexpand\the@storebox{\noexpand#1}%
43   }%
44   \@tempa
45   \begingroup
46   \aftergroup\@storebox@env@end
47   \endpefalse
48   \color@setgroup
49   \begingroup
50   \def\@currenvir{\storebox\empty}%
51   \ignorespaces
52 }

```

\endstorebox

```

53 \def\endstorebox{%
54   \unskip
55   \endgroup
56   \color@endgroup
57 }

```

\@storebox@env@end

This ends the box assignment and stores the box as PDF xform. Then the given control sequence is set to the xform number.

```

58 \def\@storebox@env@end{%
59   \edef\@tempa{%
60     \egroup
61     \immediate\pdfxform resources {\the\%
62       pdfpageresources}\collectedbox

```

```

62     \endgroup
63     \mathchardef\expandafter\noexpand\/
64         the@storebox=\pdflastxform
65     }%
66     \tempa
67 }
```

\newstorebox

```

67 \newcommand*\newstorebox[1]{%
68     \@if definable{#1}{\let#1\relax}%
69 }
```

\usestorebox

```

70 \newcommand*\usestorebox[1]{%
71     \mbox{\pdfrefxform#1}%
72 }
```

Load PGF driver patches if required:

```

73 \AtBeginDocument{%
74     \@ifpackagelloaded{pgf}{\RequirePackage{storebox-,
75         pgf}}{}%
76 }
```

`\else`

\@storebox

Macro version:

```

77 \def\@storebox#1{\@collectbox{#1}{}}
```

\@storebox@env

```

78 \def\@storebox@env{%
79     \edef\@currenvir{\@currenvir\noexpand\noexpand\/
80         \noexpand\empty}%
81     \lrbox
82 }
```

```
\endstorebox
```

```
82 \def\endstorebox{%
83   \endlrbox
84   \edef\@currenvir{\@currenvir}%
85 }
```

```
\newsavebox
```

```
86 \@ifndefinable\newstorebox{%
87 \let\newstorebox\newsavebox
88 }
```

```
\usestorebox
```

```
89 \@ifndefinable\usestorebox{%
90 \let\usestorebox\usebox
91 }
```

```
\fi
```

6.1 PGF patches

```
93 %% This support package contains patches for the file,
94 %% 'pgfsys-pdftex.def' file from
95 %% the TikZ/PGF bundle. All patches code is copyright/
96 %% by the TikZ/PGF authors
97 %% and is used in this file according to the LPPL /
98 %% license.
99 %% Please see the copyright and license notices in /
100 %% the 'pgfsys-pdftex.def' file.
101 %% The rest of the code of this file is under the /
102 %% following copyright and licence:
103 %%<! COPYRIGHT>
104 \ProvidesPackage{storebox-pgf}[%<!
105 %<! DATE>
106 %<! VERSION>
107 %<* DRIVER>
108   2099/01/01 develop
109 %</ DRIVER>
110   Patches for PGF to support transparency and /
111   shadings inside storeboxes]
```

```

108 \begingroup
109 \let\on@line\@gobble
110 %
111 \@ifl@ter{def}{pgfsys-pdftex}{2009/05/23}{%
112     \PackageInfo{storebox-pgf}{Newer version of ',
113     pgfsys-pdftex.def' found.\MessageBreak No /
114     patches applied.}%
115 \endgroup
116 \endinput
117 }{}%

```

`\storebox@patch`

```

116 \def\storebox@patch#1#2#3#4{%
117     \ifx#1\@undefined
118         \PackageInfo{storebox-pgf}{Macro \string#1\,
119             space not defined.\MessageBreak No patch /
120             applied.}%
121     \else
122         \def\@tempa#2{#3}%
123         \ifx#1\@tempa
124             \PackageInfo{storebox-pgf}{Patching macro,
125                 \string#1.}%
126             \gdef#1#2{#4}%
127         \else
128             \PackageInfo{storebox-pgf}{Macro \string#
129                 #1\space with unknown definition.\,
130                 MessageBreak No patch applied.}%
131         \fi
132     \fi
133 }
134
135 \storebox@patch\pgfsys@horishading{#1#2#3}{%
136     \%
137     \pgf@parsefunc{#3}%
138     \pgfmathparse{#2}%
139     \setbox\pgfutil@tempboxa=\hbox to\pgf@max{\vbox /
140         to\pgfmathresult pt{\vfil\pgfsys@invoke{/Sh sh,
141             }}\hfil}%
142     \pgf@process{\pgfpoint{\pgf@max}{#2}}%
143     \pdfxform resources {%
144         /Shading << /Sh << /ShadingType 2
145         /ColorSpace /DeviceRGB
146         /Domain [\pgf@pdfparseddomain]
147         /Coords [\pgf@doma\space0 \pgf@domb\space0]
148         /Function \pgf@pdfparsedfunction
149         /Extend [false false] >> >>} \pgfutil@tempboxa%
150         <<

```

```

142   \expandafter\xdef\csname @pgfshading#1!\endcsname/
143     {\leavevmode\noexpand\pdfrefxform\the\/
144      pdflastxform}%
145   }%
146   }{%
147   {%
148     \pgf@parsefunc{#3}%
149     \pgfmathparse{#2}%
150     \setbox\pgfutil@tempboxa=\hbox to\pgf@max{\vbox /
151       to\pgfmathresult pt{\vfil\pgfsys@invoke{/Sh sh/
152       }}\hfil}%
153     \pgf@process{\pgfpoint{\pgf@max}{#2}}%
154     \immediate\pdfxform resources {%
155       /Shading << /Sh << /ShadingType 2
156       /ColorSpace /DeviceRGB
157       /Domain [\pgf@pdfparseddomain]
158       /Coords [\pgf@doma\space0 \pgf@domb\space0]
159       /Function \pgf@pdfparsedfunction
160       /Extend [false false] >> >>} \pgfutil@tempboxa% /
161       <<
162     \expandafter\xdef\csname @pgfshading#1!\endcsname/
163       {\leavevmode\noexpand\pdfrefxform\the\/
164        pdflastxform}%
165   }%
166   }%
167   \storebox@patch\pgfsys@vertshading{#1#2#3}{%
168     \pgf@parsefunc{#3}%
169     \pgfmathparse{#2}%
170     \setbox\pgfutil@tempboxa=\hbox to\pgfmathresult /
171       pt{\vbox to\pgf@max{\vfil\pgfsys@invoke{/Sh sh/
172       }}\hfil}%
173     \pgf@process{\pgfpoint{#2}{\pgf@max}}%
174     \pdfxform resources {%
175       /Shading << /Sh << /ShadingType 2
176       /ColorSpace /DeviceRGB
177       /Domain [\pgf@pdfparseddomain]
178       /Coords [0 \pgf@doma\space0 \pgf@domb]
179       /Function \pgf@pdfparsedfunction
180       /Extend [false false] >> >>} \pgfutil@tempboxa% /
181       <<
182     \expandafter\xdef\csname @pgfshading#1!\endcsname/
183       {\leavevmode\noexpand\pdfrefxform\the\/
184        pdflastxform}%
185   }%
186   }{%
187   {%
188     \pgf@parsefunc{#3}%
189     \pgfmathparse{#2}%

```

```

179   \setbox\pgfutil@tempboxa=\hbox to\pgfmathresult /
180     pt{\vbox to\pgf@max{\vfil\pgfsys@invoke{/Sh sh,
181       }\hfil}%
182   \pgf@process{\pgfpoint{#2}{\pgf@max}}%
183   \immediate\pdfxform resources {%
184     /Shading << /Sh << /ShadingType 2
185     /ColorSpace /DeviceRGB
186     /Domain [\pgf@pdfparseddomain]
187     /Coords [0 \pgf@doma\space0 \pgf@domb]
188     /Function \pgf@pdfparsedfunction
189     /Extend [false false] >> >>} \pgfutil@tempboxa% /
190     <<
191   \expandafter\xdef\csname @pgfshading#1!\endcsname{%
192     {\leavevmode\noexpand\pdfrefxform\the\pdflastxform}%
193   }%
194 }
195
196 \storebox@patch\pgfsys@radialshading{#1#2#3}{%
197   {%
198     \pgf@parsefunc{#3}%
199     \setbox\pgfutil@tempboxa=\hbox to2\pgf@max{\vbox /
200       to2\pgf@max{\vfil\pgfsys@invoke{/Sh sh}}\hfil}%
201     %
202     \pgf@process{#2}%
203     \pgf@xa=\pgf@x%
204     \pgf@ya=\pgf@y%
205     \pgf@process{\pgfpoint{\pgf@max}{\pgf@max}}%
206     \advance\pgf@xa by \pgf@x%
207     \advance\pgf@ya by \pgf@y%
208     \pgf@sys@bp@correct{\pgf@x}%
209     \pgf@sys@bp@correct{\pgf@y}%
210     \pgf@sys@bp@correct{\pgf@xa}%
211     \pgf@sys@bp@correct{\pgf@ya}%
212     \pdfxform resources {%
213       /Shading << /Sh << /ShadingType 3
214       /ColorSpace /DeviceRGB
215       /Domain [\pgf@pdfparseddomain]
216       /Coords [\pgf@sys@tonumber{\pgf@xa} \/
217         pgf@sys@tonumber{\pgf@ya} \pgf@doma\space \/
218         pgf@sys@tonumber{\pgf@x} \pgf@sys@tonumber{\
219           pgf@y} \pgf@domb]
220       /Function \pgf@pdfparsedfunction
221       /Extend [true false] >> >>} \pgfutil@tempboxa% /
222       <<
223   \expandafter\xdef\csname @pgfshading#1!\endcsname{%
224     {\leavevmode\noexpand\pdfrefxform\the\pdflastxform}%
225   }%
226 }

```

```

215   {%
216     \pgf@parsefunc{#3}%
217     \setbox\pgfutil@tempboxa=\hbox to2\pgf@max{\vbox %
218       to2\pgf@max{\vfil\pgfsys@invoke{/Sh sh}}\hfil}%
219       %
220     \pgf@process{#2}%
221     \pgf@xa=\pgf@x%
222     \pgf@ya=\pgf@y%
223     \pgf@process{\pgfpoint{\pgf@max}{\pgf@max}}%
224     \advance\pgf@xa by \pgf@x%
225     \advance\pgf@ya by \pgf@y%
226     \pgf@sys@bp@correct{\pgf@x}%
227     \pgf@sys@bp@correct{\pgf@y}%
228     \pgf@sys@bp@correct{\pgf@xa}%
229     \pgf@sys@bp@correct{\pgf@ya}%
230     \immediate\pdfxform resources {%
231       /Shading << /Sh << /ShadingType 3
232       /ColorSpace /DeviceRGB
233       /Domain [\pgf@pdfparseddomain]
234       /Coords [\pgf@sys@tonumber{\pgf@xa} \/
235         pgf@sys@tonumber{\pgf@ya} \pgf@doma\space \
236         pgf@sys@tonumber{\pgf@x} \pgf@sys@tonumber{\
237           pgf@y} \pgf@domb]
238       /Function \pgf@pdfparsedfunction
239       /Extend [true false] >> >>} \pgfutil@tempboxa% /
240       <<
241     \expandafter\xdef\csname @pgfshading#1!\endcsname{%
242       {\leavevmode\noexpand\pdfrefxform\the\%
243         pdflastxform}%
244     }%
245   }%
246 }
247
248 \storebox@patch\pgfsys@functionalshading{#1#2#3#4}{%
249   {%
250     \pgf@process{#2}%
251     \pgf@xa=\pgf@x%
252     \pgf@ya=\pgf@y%
253     \pgf@process{#3}%
254     \pgf@xb=\pgf@x%
255     \pgf@yb=\pgf@y%
256     \advance\pgf@x by -\pgf@xa%
257     \advance\pgf@y by -\pgf@ya%
258     \setbox\pgfutil@tempboxa=\hbox to\pgf@x{\vbox to\%
259       pgf@y{\vfil\pgfsys@invoke{/Sh sh}}\hfil}%
260     \pgf@sys@bp@correct{\pgf@xa}%
261     \pgf@sys@bp@correct{\pgf@ya}%
262     \pgf@sys@bp@correct{\pgf@xb}%
263     \pgf@sys@bp@correct{\pgf@yb}%
264     \pgf@xc=-\pgf@xa%
265     \pgf@yc=-\pgf@ya%

```

```

255 % Now build the function
256 \pdfobj
257 stream
258 attr
259 {
260 /FunctionType 4
261 /Domain [\pgf@sys@tonumber{\pgf@xa}\space\/
262 pgf@sys@tonumber{\pgf@xb}\space\/
263 pgf@sys@tonumber{\pgf@ya}\space\/
264 pgf@sys@tonumber{\pgf@yb}]
265 /Range [0 1 0 1 0 1]
266 }
267 {{#4}}%
268 \edef\pgf@temp@num{\the\pdflastobj}%
269 \pdfxform resources {%
270 /Shading << /Sh << /ShadingType 1
271 /ColorSpace /DeviceRGB
272 /Matrix [1 0 0 1 \pgf@sys@tonumber{\pgf@xc}\space\/
273 space\pgf@sys@tonumber{\pgf@yc}]
274 /Domain [\pgf@sys@tonumber{\pgf@xa}\space\/
275 pgf@sys@tonumber{\pgf@xb}\space\/
276 pgf@sys@tonumber{\pgf@ya}\space\/
277 pgf@sys@tonumber{\pgf@yb}]
278 /Function \pgf@temp@num\space 0 R
279 >>>\pgfutil@tempboxa% <<
280 \expandafter\xdef\csname @pgfshading#1!\endcsname{%
281 {%
282 \leavevmode%
283 \noexpand\pdfrefxform\the\pdflastxform%
284 \noexpand\pdfrefobj\pgf@temp@num%
285 }%
286 }%
287 }{%
288 {%
289 \pgf@process{#2}%
290 \pgf@xa=\pgf@x%
291 \pgf@ya=\pgf@y%
292 \pgf@process{#3}%
293 \pgf@xb=\pgf@x%
294 \pgf@yb=\pgf@y%
295 \advance\pgf@x by-\pgf@xa%
296 \advance\pgf@y by-\pgf@ya%
297 \setbox\pgfutil@tempboxa=\hbox to\pgf@x{\vbox to\/
298 pgf@y{\vfil\pgfsys@invoke{/Sh sh}}\hfil}%
299 \pgf@sys@bp@correct{\pgf@xa}%
300 \pgf@sys@bp@correct{\pgf@ya}%
301 \pgf@sys@bp@correct{\pgf@xb}%
302 \pgf@sys@bp@correct{\pgf@yb}%
303 \pgf@xc=-\pgf@xa%
304 \pgf@yc=-\pgf@ya%

```

```

296     % Now build the function
297     \pdfobj
298     stream
299     attr
300     {
301         /FunctionType 4
302         /Domain [\pgf@sys@tonumber{\pgf@xa}\space\/
303             pgf@sys@tonumber{\pgf@xb}\space\/
304             pgf@sys@tonumber{\pgf@ya}\space\/
305             pgf@sys@tonumber{\pgf@yb}]
306         /Range [0 1 0 1 0 1]
307     }
308     {{#4}}%
309     \edef\pgf@temp@num{\the\pdflastobj}%
310     \immediate\pdfxform resources {%
311         /Shading << /Sh << /ShadingType 1
312         /ColorSpace /DeviceRGB
313         /Matrix [1 0 0 1 \pgf@sys@tonumber{\pgf@xc}\space\/
314             space\pgf@sys@tonumber{\pgf@yc}]
315         /Domain [\pgf@sys@tonumber{\pgf@xa}\space\/
316             pgf@sys@tonumber{\pgf@xb}\space\/
317             pgf@sys@tonumber{\pgf@ya}\space\/
318             pgf@sys@tonumber{\pgf@yb}]
319         /Function \pgf@temp@num\space 0 R
320         >> }\pgfutil@tempboxa% <<
321         \expandafter\xdef\csname @pgfshading#1!\endcsname{%
322             {%
323                 \leavevmode%
324                 \noexpand\pdfrefxform\the\pdflastxform%
325                 \noexpand\pdfrefobj\pgf@temp@num%
326             }%
327         }%
328     }%
329     }%
330     \storebox@patch\pgfsys@fadingfrombox{#1#2}{%
331         \pgf@sys@pdf@check@resources%
332         \pgf@x=-.5\wd#2%
333         \pgf@y=-.5\ht#2%
334         \advance\pgf@y by .5\dp#2%
335         \expandafter\xdef\csname pgfsmasktrans@#1\/
336             endcsname{%
337                 \noexpand\pgftransformcm{1}{0}{0}{1}{\noexpand\
338                     pgfqpoint{\the\pgf@x}{\the\pgf@y}}}}%
339         \pdfxform resources { \/
340             pgf@sys@pdf@possible@resources } #2%
341         \expandafter\xdef\csname pgfsmaskxform@#1\/
342             endcsname{\the\pdflastxform}%
343     }%
344 }
```

```

333 {%
334   \pgf@sys@pdf@check@resources%
335   \pgf@x=-.5\wd#2%
336   \pgf@y=-.5\ht#2%
337   \advance\pgf@y by.5\dp#2%
338   \expandafter\xdef\csname pgfsmasktrans@#1\%
339     endcsname{%
340       \noexpand\pgftransformcm{1}{0}{0}{1}{\noexpand\%
341         pgfqpoint{\the\pgf@x}{\the\pgf@y}}}%
342       \immediate\pdfxform resources { \
343         pgf@sys@pdf@possible@resources } #2%
344       \expandafter\xdef\csname pgfsmaskxform@#1\%
345         endcsname{\the\pdflastxform}%
346     }%
347   }%
348   \storebox@patch\pgfsys@transparencygroupfrombox{#1}{%
349     \pgf@sys@pdf@check@resources%
350     \pdfxform
351     attr { /Group << /S /Transparency >> } %<<
352     resources { \pgf@sys@pdf@possible@resources }
353     #1%
354     \setbox#1=\hbox{\pdfrefxform\pdflastxform}%
355   }{%
356     \pgf@sys@pdf@check@resources%
357     \immediate\pdfxform
358     attr { /Group << /S /Transparency >> } %<<
359     resources { \pgf@sys@pdf@possible@resources }
360     #1%
361     \setbox#1=\hbox{\pdfrefxform\pdflastxform}%
362   }
363 \endgroup

```