

The **l3pdfxform** module

Commands for form XObjects

L^AT_EX PDF management bundle

The L^AT_EX Project^{*}

Version 0.97d, released 2026-10-06

1 **l3pdfxform** documentation

This module contains a number of commands to create “form XObjects”, for which pdfT_EX introduced the short name “xforms”.

The status is still beta. The dvips route is now better supported but there are open issues if landscape pages are involved or if the objects are larger than the page. With dvips the creation of a form involves typesetting and so can affect spacing.

Probably some of the function will also need to be enhanced by hooks.

<code>\pdfxform_new:nnn</code>	<code>\pdfxform_new:nnn {<name>} {<attributes>} {<content>}</code>
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New: 2019-08-05
Updated: 2021-02-14

This command create a new form XObject that can be used as appearance or directly later. If the `<content>` contains BDC-marks it should *not* be given as a previously typeset box, but directly so that the names of the BDC-marks can be added to the resources of the xform. The xform will automatically include the resources of the current page, see below `\pdfxform_new:nnnn` if this is not wanted. `<attributes>` can be used to extend the resources, e.g. to add a XObject dictionary, but is generally empty (note that the **Font** is added automatically by the primitives). If really a special resource management is needed `\pdfxform_new:nnnn` should be preferred. The content will be typeset in a hbox. With pdf_latex and lua_tex the surrounding color is *not* stored in the form XObject but should be if wanted added e.g. with `\color_select:n{.}`. This keeps the option of color injection open.

<code>\pdfxform_new:nnnn</code>	<code>\pdfxform_new:nnnn {<name>} {<attributes>} {<content>}{<excluded resources>}</code>
---------------------------------	---

New: 2026-10-06

This command is like `\pdfxform_new:nnn`. The additional argument `<excluded resources>` can be used to suppress the global resources added by the former command. This only works for the backends pdf_tex, lua_tex, xet_ex and dvipdf_mx. Suppressing resources can be necessary if the form XObject is itself used as a resources, e.g., to define a pattern. The argument takes a comma list of one or more of the five names **pattern**, **shading**, **extgstate**, **properties**, **colorspace** and then suppresses the relevant resources.

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<code>\pdfxform_use:n</code>	<code>\pdfxform_use:n {<name>}</code>
New: 2019-08-05	This command uses (typesets) a previously created form XObject. If the surrounding color is different, it is injected in the form XObject with the engines pdftex or luatex.
<code>\pdfxform_ref:n *</code>	<code>\pdfxform_ref:n {<name>}</code>
New: 2019-08-05	Inserts the appropriate information to reference the xform <i><name></i> in for example appearance dictionaries.
<code>\pdfxform_wd:n *</code>	<code>\pdfxform_wd:n {<name>}</code>
<code>\pdfxform_ht:n *</code>	These command give back the sizes of the form XObject. The values are stored in tl-variables with the unit pt and not in dimensions!
<code>\pdfxform_dp:n *</code>	
New: 2019-08-05	
<code>\pdfxform_if_exist_p:n *</code>	<code>\pdfxform_if_exist_p:n {<name>}</code>
<code>\pdfxform_if_exist_nTF *</code>	<code>\pdfxform_if_exist_nTF {<name>} {<true code>} {<false code>}</code>
New: 2020-04-29	These commands tests if an xform with name <i>{<name>}</i> has been already defined.

2 l3pdfxform implementation

```

1 <@@=pdf>
2 <*header>
3 \ProvidesExplPackage{l3pdfxform}{2026-10-06}{0.97d}
4   {command to create xforms (beta)---LaTeX PDF management bundle}
5 </header>

```

2.1 Form XObject (pdfxform)

`\pdfxform_new:nnn`

```

6 <*package>
7 \cs_new_protected:Npn \pdfxform_new:nnn #1 #2 #3
8 {
9   \__pdf_backend_xform_new:nnnnn { #1 } { #2 } { } { #3 } { }
10 }

```

(End of definition for `\pdfxform_new:nnn`. This function is documented on page 1.)

`\pdfxform_new:nnnn`

```

11 \cs_new_protected:Npn \pdfxform_new:nnnn #1 #2 #3 #4
12 {
13   \__pdf_backend_xform_new:nnnnn { #1 } { #2 } { } { #3 } { #4 }
14 }

```

(End of definition for `\pdfxform_new:nnnn`. This function is documented on page 1.)

`\pdfxform_use:n`

```

15 \cs_new_protected:Npn \pdfxform_use:n #1
16 {
17   \__pdf_backend_xform_use:n { #1 }
18 }

```

(End of definition for `\pdfxform_use:n`. This function is documented on page 2.)

```

\pdfxform_ref:n
\pdfxform_ref:o 19 % expansion?
                  20 \cs_new:Npn \pdfxform_ref:n #1
                  21 {
                  22   \__pdf_backend_xform_ref:n { #1 }
                  23 }
                  24
                  25 \cs_generate_variant:Nn \pdfxform_ref:n {o}

```

(End of definition for `\pdfxform_ref:n`. This function is documented on page 2.)

```

\pdfxform_wd:n
\pdfxform_ht:n 26 \cs_new:Npn \pdfxform_wd:n #1
\pdfxform_dp:n 27 {
                  28   \tl_use:c { c__pdf_backend_xform_wd_ \tl_to_str:n { #1 } _tl }
                  29 }
                  30
                  31 \cs_new:Npn \pdfxform_ht:n #1
                  32 {
                  33   \tl_use:c { c__pdf_backend_xform_ht_ \tl_to_str:n { #1 } _tl }
                  34 }
                  35
                  36 \cs_new:Npn \pdfxform_dp:n #1
                  37 {
                  38   \tl_use:c { c__pdf_backend_xform_dp_ \tl_to_str:n { #1 } _tl }
                  39 }

```

(End of definition for `\pdfxform_wd:n`, `\pdfxform_ht:n`, and `\pdfxform_dp:n`. These functions are documented on page 2.)

```

\pdfxform_if_exist_p:n The command is defined in the backend (to avoid timing problems).
\pdfxform_if_exist:nTF (End of definition for \pdfxform_if_exist:nTF. This function is documented on page 2.)

```

40 `\</package>`

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