

# The l3pdfxform package

## Commands for form XObjects

### PDFmanagement bundle (testphase)

The L<sup>A</sup>T<sub>E</sub>XProject\*

Version 0.95a, released 2021-02-22

## 1 l3pdfxform documentation

This module contains a number of commands to create “form XObjects”, for which pdfT<sub>E</sub>X introduced the short name “xforms”.

The status is still beta, so the style itself is currently named l3pdfxform-beta. Missing is for example code for the dvips route. Probably some of the function will also need to be enhanced by hooks.

---

<code>\pdfxform_new:nnn</code>	<code>\pdfxform_new:nnn {&lt;name&gt;} {&lt;attributes&gt;} {&lt;content&gt;}</code>
--------------------------------	--

---

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. The content will be typeset in a hbox. With pdf<sub>l</sub>atex and lua<sub>t</sub>ex 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_use:n</code>	<code>\pdfxform_use:n {&lt;name&gt;}</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 pdf<sub>t</sub>ex or lua<sub>t</sub>ex.

---

<code>\pdfxform_ref:n</code> *	<code>\pdfxform_ref:n {&lt;name&gt;}</code>
--------------------------------	---

---

New: 2019-08-05

Inserts the appropriate information to reference the xform *<name>* in for example appearance dictionaries.

---

<code>\pdfxform_wd:n</code> *	<code>\pdfxform_wd:n {&lt;name&gt;}</code>
-------------------------------	--

---

`\pdfxform_ht:n` \*

`\pdfxform_dp:n` \*

New: 2019-08-05

These command give back the sizes of the form XObject. The values are stored in t<sub>l</sub>-variables with the unit pt and not in dimensions!

---

\*E-mail: [latex-team@latex-project.org](mailto:latex-team@latex-project.org)

---

```

\pdfxform_if_exist_p:n * \pdfxform_if_exist_p:n {<name>}
\pdfxform_if_exist:nTF * \pdfxform_if_exist:NTF <name> {<true code>} {<false code>}

```

---

New: 2020-04-29 These command tests if an xform with name {<name>} has been already defined.

---

## 2 l3pdfxform implementation

```

1 <*package>
2 <@@=pdf>
3 \ProvidesExplPackage {l3pdfxform-beta} {2021-02-22} {0.95a}
4 {command to create xforms (beta)---PDFmanagement bundle (testphase)}

```

### 2.1 FormXObject (pdfxform)

**\pdfxform\_new:nnn**

```

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

```

(End definition for \pdfxform\_new:nnn. This function is documented on page 1.)

**\pdfxform\_use:n**

```

10 \cs_new_protected:Npn \pdfxform_use:n #1
11 {
12   \__pdf_backend_xform_use:n { #1 }
13 }

```

(End definition for \pdfxform\_use:n. This function is documented on page 1.)

**\pdfxform\_ref:n**

**\pdfxform\_ref:o**

```

14 % expansion?
15 \cs_new:Npn \pdfxform_ref:n #1
16 {
17   \__pdf_backend_xform_ref:n { #1 }
18 }
19
20 \cs_generate_variant:Nn \pdfxform_ref:n {o}

```

(End definition for \pdfxform\_ref:n. This function is documented on page 1.)

**\pdfxform\_wd:n**

**\pdfxform\_ht:n**

**\pdfxform\_dp:n**

```

21 \cs_new:Npn \pdfxform_wd:n #1
22 {
23   \tl_use:c { c__pdf_backend_xform_wd_ \tl_to_str:n { #1 } _tl }
24 }
25
26 \cs_new:Npn \pdfxform_ht:n #1
27 {
28   \tl_use:c { c__pdf_backend_xform_ht_ \tl_to_str:n { #1 } _tl }
29 }
30
31 \cs_new:Npn \pdfxform_dp:n #1

```

```

32 {
33   \tl_use:c { c__pdf_backend_xform_dp_ \tl_to_str:n { #1 } _tl }
34 }

```

(End definition for `\pdfxform_wd:n`, `\pdfxform_ht:n`, and `\pdfxform_dp:n`. These functions are documented on page [1](#).)

```

35 \endpackage

```

## 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.

<b>C</b>		
cs commands:		<code>\pdfxform_if_exist:NTF</code> ..... <a href="#">2</a>
<code>\cs_generate_variant:Nn</code> ..... <a href="#">20</a>		<code>\pdfxform_if_exist:nTF</code> ..... <a href="#">2</a>
<code>\cs_new:Npn</code> ..... <a href="#">15</a> , <a href="#">21</a> , <a href="#">26</a> , <a href="#">31</a>		<code>\pdfxform_if_exist_p:n</code> ..... <a href="#">2</a>
<code>\cs_new_protected:Npn</code> ..... <a href="#">6</a> , <a href="#">10</a>		<code>\pdfxform_new:nnn</code> ..... <a href="#">1</a> , <a href="#">5</a> , <a href="#">6</a>
<b>P</b>		<code>\pdfxform_ref:n</code> ..... <a href="#">1</a> , <a href="#">14</a> , <a href="#">15</a> , <a href="#">20</a>
pdf internal commands:		<code>\pdfxform_use:n</code> ..... <a href="#">1</a> , <a href="#">10</a> , <a href="#">10</a>
<code>\__pdf_backend_xform_new:nnnn</code> .... <a href="#">8</a>	<code>\ProvidesExplPackage</code> ..... <a href="#">3</a>	
<code>\__pdf_backend_xform_ref:n</code> ..... <a href="#">17</a>		
<code>\__pdf_backend_xform_use:n</code> ..... <a href="#">12</a>		
<b>T</b>		
pdfxform commands:	tl commands:	
<code>\pdfxform_dp:n</code> ..... <a href="#">1</a> , <a href="#">21</a> , <a href="#">31</a>	<code>\tl_to_str:n</code> ..... <a href="#">23</a> , <a href="#">28</a> , <a href="#">33</a>	
<code>\pdfxform_ht:n</code> ..... <a href="#">1</a> , <a href="#">21</a> , <a href="#">26</a>	<code>\tl_use:N</code> ..... <a href="#">23</a> , <a href="#">28</a> , <a href="#">33</a>	