

# The **l3pdfxform** module

## Commands for form XObjects

### L<sup>A</sup>T<sub>E</sub>X PDF management testphase bundle

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

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.

<hr/> <b>\pdfxform_new:nnn</b>	<b>\pdfxform_new:nnn</b> {<name>} {<attributes>} {<content>}
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 <i>not</i> 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 luatex the surrounding color is <i>not</i> stored in the form XObject but should be if wanted added e.g. with <code>\color_select:n{.}</code> . This keeps the option of color injection open.
<hr/> <b>\pdfxform_use:n</b>	<b>\pdfxform_use:n</b> {<name>}
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>l</sub> tex or luatex.
<hr/> <b>\pdfxform_ref:n *</b>	<b>\pdfxform_ref:n</b> {<name>}
New: 2019-08-05	Inserts the appropriate information to reference the xform <name> in for example appearance dictionaries.
<hr/> <b>\pdfxform_wd:n *</b>	<b>\pdfxform_wd:n</b> {<name>}
<b>\pdfxform_ht:n *</b>	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!
<b>\pdfxform_dp:n *</b>	
New: 2019-08-05	

---

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

---

<code>\pdfxform_if_exist_p:n *</code> <code>\pdfxform_if_exist:nTF *</code>	<code>\pdfxform_if_exist_p:n {&lt;name&gt;}</code> <code>\pdfxform_if_exist:NTF &lt;name&gt; {&lt;true code&gt;} {&lt;false code&gt;}</code>
--	---

---

New: 2020-04-29

These command tests if an xform with name `{<name>}` has been already defined.

---

## 2 l3pdfxform implementation

```

1 <@@=pdf>
2 <*header>
3 \ProvidesExplPackage {l3pdfxform-beta} {2021-02-22} {0.95a}
4 {command to create xforms (beta)---LaTeX PDF management testphase 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:nnnn { #1 } { #2 } { } { #3 }
10 }

```

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

`\pdfxform_use:n`

```

11 \cs_new_protected:Npn \pdfxform_use:n #1
12 {
13   \__pdf_backend_xform_use:n { #1 }
14 }

```

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

`\pdfxform_ref:n`

`\pdfxform_ref:o`

```

15 % expansion?
16 \cs_new:Npn \pdfxform_ref:n #1
17 {
18   \__pdf_backend_xform_ref:n { #1 }
19 }
20
21 \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`

```

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

```

```

32 \cs_new:Npn \pdfxform_dp:n #1
33 {
34   \tl_use:c { c__pdf_backend_xform_dp_ \tl_to_str:n { #1 } _tl }
35 }

```

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

```

36 \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="#">21</a>		<code>\pdfxform_if_exist:nTF</code> ..... <a href="#">2</a>
<code>\cs_new:Npn</code> ..... <a href="#">16</a> , <a href="#">22</a> , <a href="#">27</a> , <a href="#">32</a>		<code>\pdfxform_if_exist_p:n</code> ..... <a href="#">2</a>
<code>\cs_new_protected:Npn</code> ..... <a href="#">7</a> , <a href="#">11</a>		<code>\pdfxform_new:nnn</code> ..... <a href="#">1</a> , <a href="#">6</a> , <a href="#">7</a>
		<code>\pdfxform_ref:n</code> ..... <a href="#">1</a> , <a href="#">15</a> , <a href="#">16</a> , <a href="#">21</a>
<b>P</b>		<code>\pdfxform_use:n</code> ..... <a href="#">1</a> , <a href="#">11</a> , <a href="#">11</a>
pdf internal commands:		<code>\pdfxform_wd:n</code> ..... <a href="#">1</a> , <a href="#">22</a> , <a href="#">22</a>
<code>\__pdf_backend_xform_new:nnnn</code> .... <a href="#">9</a>		<code>\ProvidesExplPackage</code> ..... <a href="#">3</a>
<code>\__pdf_backend_xform_ref:n</code> ..... <a href="#">18</a>		
<code>\__pdf_backend_xform_use:n</code> ..... <a href="#">13</a>		
<b>T</b>		
pdfxform commands:	tl commands:	
<code>\pdfxform_dp:n</code> ..... <a href="#">1</a> , <a href="#">22</a> , <a href="#">32</a>	<code>\tl_to_str:n</code> ..... <a href="#">24</a> , <a href="#">29</a> , <a href="#">34</a>	
<code>\pdfxform_ht:n</code> ..... <a href="#">1</a> , <a href="#">22</a> , <a href="#">27</a>	<code>\tl_use:N</code> ..... <a href="#">24</a> , <a href="#">29</a> , <a href="#">34</a>	