The l3pdfxform package
Commands for form XObjects

The LaTeX3 Project*

Released XXXX-XX-XX

1 l3pdfxform documentation

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

The status is still beta, so the style itself is 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.

`\pdfxform_new:nnn` `\pdfxform_new:nnn {⟨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 *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 pdflatex and luatex 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.

`\pdfxform_use:n` `\pdfxform_use:n {⟨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 pdftex or luatex.

`\pdfxform_ref:n` ⋆ `\pdfxform_ref:n {⟨name⟩}`

New: 2019-08-05

Inserts the appropriate information to reference the xform ⟨*name*⟩ in for example appearance dictionaries.

`\pdfxform_wd:n` ⋆ `\pdfxform_wd:n {⟨name⟩}`
`\pdfxform_ht:n` ⋆
`\pdfxform_dp:n` ⋆

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!

New: 2019-08-05

`\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.

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2 l3pdfxform implementation

```
⟨*package⟩
⟨@@=pdf⟩
\ProvidesExplPackage {l3pdfxform-beta} {2021-02-14} {0.3}
  {command to create xforms}
```

2.1 Form XObject (pdfxform)

```
⟨*package⟩
\cs_new_protected:Npn  \pdfxform_new:nnn #1 #2 #3
  {
    \__pdf_backend_xform_new:nnnn { #1 } { #2 } {  } { #3 }
  }

\cs_new_protected:Npn \pdfxform_use:n #1
  {
    \__pdf_backend_xform_use:n { #1 }
  }
% expansion?
\cs_new:Npn \pdfxform_ref:n #1
  {
    \__pdf_backend_xform_ref:n { #1 }
  }

\cs_generate_variant:Nn \pdfxform_ref:n {o}

\cs_new:Npn \pdfxform_wd:n #1
  {
    \tl_use:c { c__pdf_backend_xform_wd_ \tl_to_str:n { #1 } _tl }
  }

\cs_new:Npn \pdfxform_ht:n #1
  {
    \tl_use:c { c__pdf_backend_xform_ht_ \tl_to_str:n { #1 } _tl }
  }

\cs_new:Npn \pdfxform_dp:n #1
  {
    \tl_use:c { c__pdf_backend_xform_dp_ \tl_to_str:n { #1 } _tl }
  }
⟨/package⟩
```

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