

File I

Implementation

1 l3pdf implementation

```

1 <*initex | package>
2 <@@=pdf>
3 <*package>
4 \ProvidesExplPackage{l3pdf}{2019-10-11}{}
5 {L3 Experimental core PDF support}
6 </package>

\g__pdf_init_bool A flag so we have some chance of avoiding setting things we are not allowed to.
7 \bool_new:N \g__pdf_init_bool
8 <*package>
9 \cs_if_exist:NT \documentclass
10 {
11   \AtBeginDocument
12     { \bool_gset_true:N \g__pdf_init_bool }
13 }
14 </package>

(End definition for \g__pdf_init_bool.)

```

1.1 Compression

\pdf_uncompress: Simple to do.

```

15 \cs_new_protected:Npn \pdf_uncompress:
16 {
17   \bool_if:NF \g__pdf_init_bool
18   {
19     \__pdf_backend_compresslevel:n { 0 }
20     \__pdf_backend_compress_objects:n { \c_false_bool }
21   }
22 }

(End definition for \pdf_uncompress:. This function is documented on page ??.)

```

1.2 Objects

\pdf_object_new:nn Simple to do.

```

\pdf_object_write:nn 23 \cs_new_protected:Npn \pdf_object_new:nn #1#2
\pdf_object_write:nx 24 { \__pdf_backend_object_new:nn {#1} {#2} }
\pdf_object_ref:n 25 \cs_new_protected:Npn \pdf_object_write:nn #1#2
\pdf_object_now:nn 26 { \__pdf_backend_object_write:nn {#1} {#2} }
\pdf_object_now:nx 27 \cs_generate_variant:Nn \pdf_object_write:nn { nx }
\pdf_object_last: 28 \cs_new:Npn \pdf_object_ref:n #1 { \__pdf_backend_object_ref:n {#1} }
29 \cs_new_protected:Npn \pdf_object_now:nn #1#2
30 { \__pdf_backend_object_now:nn {#1} {#2} }
31 \cs_generate_variant:Nn \pdf_object_now:nn { nx }
32 \cs_new:Npn \pdf_object_last: { \__pdf_backend_object_last: }

(End definition for \pdf_object_new:nn and others. These functions are documented on page ??.)

```

1.3 Version

```

\pdf_version_compare:Nn
__pdf_version_compare_=:w 33 % To compare version, we need to split the given value then deal with both
__pdf_version_compare_<:w 34 % major and minor version
__pdf_version_compare_>:w 35 \prg_new_conditional:Npnn \pdf_version_compare:Nn #1#2 { p , T , F , TF }
36 { \use:c { __pdf_version_compare_ #1 :w } #2 . . \q_stop }
37 \cs_new:cpn { __pdf_version_compare_=:w } #1 . #2 . #3 \q_stop
38 {
39   \bool_lazy_and:nnTF
40   { \int_compare_p:nNn \__pdf_backend_version_major: = {#1} }
41   { \int_compare_p:nNn \__pdf_backend_version_minor: = {#2} }
42   { \prg_return_true: }
43   { \prg_return_false: }
44 }
45 \cs_new:cpn { __pdf_version_compare_<:w } #1 . #2 . #3 \q_stop
46 {
47   \bool_lazy_or:nnTF
48   { \int_compare_p:nNn \__pdf_backend_version_major: < {#1} }
49   {
50     \bool_lazy_and_p:nn
51     { \int_compare_p:nNn \__pdf_backend_version_major: = {#1} }
52     { \int_compare_p:nNn \__pdf_backend_version_minor: < {#2} }
53   }
54   { \prg_return_true: }
55   { \prg_return_false: }
56 }
57 \cs_new:cpn { __pdf_version_compare_>:w } #1 . #2 . #3 \q_stop
58 {
59   \bool_lazy_or:nnTF
60   { \int_compare_p:nNn \__pdf_backend_version_major: > {#1} }
61   {
62     \bool_lazy_and_p:nn
63     { \int_compare_p:nNn \__pdf_backend_version_major: = {#1} }
64     { \int_compare_p:nNn \__pdf_backend_version_minor: > {#2} }
65   }
66   { \prg_return_true: }
67   { \prg_return_false: }
68 }

```

(End definition for \pdf_version_compare:Nn and others. This function is documented on page ??.)

```

\pdf_version_gset:n Split the version and set.
\pdf_version_min_gset:n 69 \cs_new_protected:Npn \pdf_version_gset:n #1
\__pdf_version_gset:w 70 { \__pdf_version_gset:w #1 . . \q_stop }
71 \cs_new_protected:Npn \pdf_version_min_gset:n #1
72 {
73   \pdf_version_compare:NnT < {#1}
74   { \__pdf_version_gset:w #1 . . \q_stop }
75 }
76 \cs_new_protected:Npn \__pdf_version_gset:w #1 . #2 . #3 \q_stop
77 {
78   \bool_if:NF \g__pdf_init_bool
79   {

```

```

80     \_pdf_backend_version_major_gset:n {#1}
81     \_pdf_backend_version_minor_gset:n {#2}
82   }
83 }

```

(End definition for \pdf_version_gset:n, \pdf_version_min_gset:n, and _pdf_version_gset:w. These functions are documented on page ??.)

\pdf_version: Wrappers.

```

\pdf_version_major: 84 \cs_new:Npn \pdf_version:
\pdf_version_minor: 85 { \_pdf_backend_version_major: . \_pdf_backend_version_minor: }
86 \cs_new:Npn \pdf_version_major: { \_pdf_backend_version_major: }
87 \cs_new:Npn \pdf_version_minor: { \_pdf_backend_version_minor: }

```

(End definition for \pdf_version:, \pdf_version_major:, and \pdf_version_minor:. These functions are documented on page ??.)

```

88 </initex | package>

```

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.

A	
<code>\AtBeginDocument</code>	11
B	
bool commands:	
<code>\bool_gset_true:N</code>	12
<code>\bool_if:NTF</code>	17, 78
<code>\bool_lazy_and:nnTF</code>	39
<code>\bool_lazy_and_p:nn</code>	50, 62
<code>\bool_lazy_or:nnTF</code>	47, 59
<code>\bool_new:N</code>	7
<code>\c_false_bool</code>	20
C	
cs commands:	
<code>\cs_generate_variant:Nn</code>	27, 31
<code>\cs_if_exist:NTF</code>	9
<code>\cs_new:Npn</code> 28, 32, 37, 45, 57, 84, 86, 87	
<code>\cs_new_protected:Npn</code>	15, 23, 25, 29, 69, 71, 76
D	
<code>\documentclass</code>	9
I	
int commands:	
<code>\int_compare_p:nNn</code>	40, 41, 48, 51, 52, 60, 63, 64
P	
pdf commands:	
<code>\pdf_object_last:</code>	23
<code>\pdf_object_new:nn</code>	23
<code>\pdf_object_now:nn</code>	23
<code>\pdf_object_ref:n</code>	23
<code>\pdf_object_write:nn</code>	23
<code>\pdf_uncompress:</code>	15
<code>\pdf_version:</code>	84
<code>\pdf_version_compare:Nn</code>	33
<code>\pdf_version_compare:NnTF</code>	73
<code>\pdf_version_gset:n</code>	69
<code>\pdf_version_major:</code>	84
<code>\pdf_version_min_gset:n</code>	69
<code>\pdf_version_minor:</code>	84
pdf internal commands:	
<code>__pdf_backend_compress_objects:n</code>	20
<code>__pdf_backend_compresslevel:n</code> ..	19
<code>__pdf_backend_object_last:</code>	32
<code>__pdf_backend_object_new:nn</code>	24
<code>__pdf_backend_object_now:nn</code>	30
<code>__pdf_backend_object_ref:n</code>	28
<code>__pdf_backend_object_write:nn</code> ..	26
<code>__pdf_backend_version_major:</code>	40, 48, 51, 60, 63, 85, 86
<code>__pdf_backend_version_major_gset:n</code>	80
<code>__pdf_backend_version_minor:</code>	41, 52, 64, 85, 87
<code>__pdf_backend_version_minor_gset:n</code>	81
<code>\g_pdf_init_bool</code>	7, 17, 78
<code>__pdf_version_compare_<:w</code>	33
<code>__pdf_version_compare_=:w</code>	33
<code>__pdf_version_compare_>:w</code>	33
<code>__pdf_version_gset:w</code>	69
prg commands:	
<code>\prg_new_conditional:Npnn</code>	35
<code>\prg_return_false:</code>	43, 55, 67
<code>\prg_return_true:</code>	42, 54, 66
<code>\ProvidesExplPackage</code>	4
Q	
quark commands:	
<code>\q_stop</code>	36, 37, 45, 57, 70, 74, 76
U	
use commands:	
<code>\use:N</code>	36