

# File I

## Implementation

### 1 l3pdf implementation

```

1 <*package>
2 <@@=pdf>
3 \ProvidesExplPackage{l3pdf}{2021-02-06}{ }
4   {L3 Experimental core PDF support}

```

\s\_\_pdf\_stop Internal scan marks.

```

5 \scan_new:N \s__pdf_stop

```

*(End definition for \s\_\_pdf\_stop.)*

\g\_\_pdf\_init\_bool A flag so we have some chance of avoiding setting things we are not allowed to.

```

6 \bool_new:N \g__pdf_init_bool
7 <*package>
8 \cs_if_exist:NT \documentclass
9   {
10     \AtBeginDocument
11       { \bool_gset_true:N \g__pdf_init_bool }
12   }
13 </package>

```

*(End definition for \g\_\_pdf\_init\_bool.)*

#### 1.1 Compression

\pdf\_uncompress: Simple to do.

```

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

```

*(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 22 \cs_new_protected:Npn \pdf_object_new:nn #1#2
\pdf_object_write:nx 23   { \__pdf_backend_object_new:nn {#1} {#2} }
\pdf_object_if_exist_p:n 24 \prg_new_conditional:Npnn \pdf_object_if_exist:n #1 { p , T , F , TF }
\pdf_object_if_exist:nTF 25   {
\pdf_object_ref:n 26     \int_if_exist:cTF { c__pdf_backend_object_ \tl_to_str:n {#1} _int }
\pdf_object_now:nn 27     { \prg_return_true: }
\pdf_object_now:nx 28     { \prg_return_false: }
\pdf_object_last:

```

```

29 }
30 \cs_new_protected:Npn \pdf_object_write:nn #1#2
31 { \__pdf_backend_object_write:nn {#1} {#2} }
32 \cs_generate_variant:Nn \pdf_object_write:nn { nx }
33 \cs_new:Npn \pdf_object_ref:n #1 { \__pdf_backend_object_ref:n {#1} }
34 \cs_new_protected:Npn \pdf_object_now:nn #1#2
35 { \__pdf_backend_object_now:nn {#1} {#2} }
36 \cs_generate_variant:Nn \pdf_object_now:nn { nx }
37 \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 38 % To compare version, we need to split the given value then deal with both
__pdf_version_compare<:w 39 % major and minor version
__pdf_version_compare>:w 40 \prg_new_conditional:Npnn \pdf_version_compare:Nn #1#2 { p , T , F , TF }
41 { \use:c { __pdf_version_compare_ #1 :w } #2 . . \s__pdf_stop }
42 \cs_new:cpn { __pdf_version_compare=:w } #1 . #2 . #3 \s__pdf_stop
43 {
44   \bool_lazy_and:nnTF
45   { \int_compare_p:nNn \__pdf_backend_version_major: = {#1} }
46   { \int_compare_p:nNn \__pdf_backend_version_minor: = {#2} }
47   { \prg_return_true: }
48   { \prg_return_false: }
49 }
50 \cs_new:cpn { __pdf_version_compare<:w } #1 . #2 . #3 \s__pdf_stop
51 {
52   \bool_lazy_or:nnTF
53   { \int_compare_p:nNn \__pdf_backend_version_major: < {#1} }
54   {
55     \bool_lazy_and_p:nn
56     { \int_compare_p:nNn \__pdf_backend_version_major: = {#1} }
57     { \int_compare_p:nNn \__pdf_backend_version_minor: < {#2} }
58   }
59   { \prg_return_true: }
60   { \prg_return_false: }
61 }
62 \cs_new:cpn { __pdf_version_compare>:w } #1 . #2 . #3 \s__pdf_stop
63 {
64   \bool_lazy_or:nnTF
65   { \int_compare_p:nNn \__pdf_backend_version_major: > {#1} }
66   {
67     \bool_lazy_and_p:nn
68     { \int_compare_p:nNn \__pdf_backend_version_major: = {#1} }
69     { \int_compare_p:nNn \__pdf_backend_version_minor: > {#2} }
70   }
71   { \prg_return_true: }
72   { \prg_return_false: }
73 }

```

(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
\__pdf_version_gset:w
74 \cs_new_protected:Npn \pdf_version_gset:n #1
75 { \__pdf_version_gset:w #1 . . \s__pdf_stop }
76 \cs_new_protected:Npn \pdf_version_min_gset:n #1
77 {
78   \pdf_version_compare:NnT < {#1}
79   { \__pdf_version_gset:w #1 . . \s__pdf_stop }
80 }
81 \cs_new_protected:Npn \__pdf_version_gset:w #1 . #2 . #3\s__pdf_stop
82 {
83   \bool_if:NF \g__pdf_init_bool
84   {
85     \__pdf_backend_version_major_gset:n {#1}
86     \__pdf_backend_version_minor_gset:n {#2}
87   }
88 }

(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:
\pdf_version_minor:
89 \cs_new:Npn \pdf_version:
90 { \__pdf_backend_version_major: . \__pdf_backend_version_minor: }
91 \cs_new:Npn \pdf_version_major: { \__pdf_backend_version_major: }
92 \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 ??.)

```

## 1.4 Destinations

```

\pdf_destination:nn
93 \cs_new_protected:Npn \pdf_destination:nn #1 #2
94 { \__pdf_backend_destination:nn {#1}{#2} }

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

\pdf_destination:nnnn
95 \cs_new_protected:Npn \pdf_destination:nnnn #1 #2 #3 #4
96 {
97   \hbox_to_zero:n
98   { \__pdf_backend_destination:nnnn {#1} {#2} {#3} {#4} }
99 }

(End definition for \pdf_destination:nnnn. This function is documented on page ??.)
100 </package>

```

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