

The documentmetadata-support code^{*}

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1 Introduction

The kernel command `\DocumentMetadata`, which can be used as the very first declaration in a document (i.e., before `\documentclass`), defines metadata and other configuration data that applies to the document as a whole (using a key/value syntax). It loads and activates the PDF management code from `pdfmanagement-testphase` and loads and activates code currently stored in latex-lab modules needed for various features developed as part of the multi-year “Tagged PDF” project. [1]

While the underlying functionality is still under development (e.g., further keys will be added over time and keys marked temporary may vanish again) the code for `\DocumentMetadata` is placed in a separate bundle, so that it is easier to update it without the need to build a full L^AT_EX release. Over time the functionality will move fully into the kernel.

As the loading of the PDF management forces the loading of the `l3backend` files, a backend that can’t be detected automatically like `dvipdfmx`, must be set in the first `\DocumentMetadata`.

From a process perspective `\DocumentMetadata` loads the `pdfmanagement-testphase` code and the latex-lab modules the first time it is called and then redefines itself to only manage key/value pairs in case it is called more than once. In particular, this means that a document without a `\DocumentMetadata` declaration has no code available for extended management of PDF output and for tagging support.

2 The `\DocumentMetadata` command

<code>\DocumentMetadata</code>	<code>\DocumentMetadata{<key-value list>}</code>
--------------------------------	--

The command should be used as the first command in a document, before `\documentclass`. It takes a key-value argument.

Starting with the release 2025-11-01 `\DocumentMetadata` will always load the new modules which changes L^AT_EX internals and add tagging support code.

For documents that want to load the PDF management but do not want the new tagging support code we provide a dedicated package. Such documents should replace

```
\DocumentMetadata{pdfversion=1.7,  
pdfstandard=a-3b}
```

^{*}This file has version 1.0w dated 2025-10-13, © L^AT_EX Project.

by

```
\RequirePackage{pdfmanagement}  
\SetKeys[document/metadata]{pdfversion=1.7,  
pdfstandard=a-3b}
```

Currently the modules loaded by `\DocumentMetadata` are the following. Details and documentation can be found in the various `latex-lab-⟨module⟩.pdf`:

names This declares tag names for the structure.

new-or-2 This changes output routine sockets and adds support for the paragraph tagging. It also loads the new footnote code.

block This reimplements lists and blocks environments and add tagging support.

sec This adapts commands related to sectioning to make them tagging aware.

toc This adapts commands related to the table of contents and similar list to make them tagging aware.

minipage This adds tagging support to `minipage` and `\parbox`.

graphic This enables tagging support for the `\includegraphics` command and the `picture` environment.

float This adds tagging support to floats.

bib This adds tagging support to citations and bibliographies. This code is also loaded by the `phase-III` key.

text This module adds tagging support to the L^AT_EX logo and to the `\emph` command.

marginpar This module adds tagging support to the `\marginpar` command.

title This module add tagging support to the `\maketitle` command if a standard class is used. It also enhances the `\title` and `\author` commands to fill the XMP-metadata and set the window title. It is not compatible with packages and classes which redefine these commands too.

table This provides tagging for `tabular`, `longtable` and similar table environments. Its use (and restrictions is documented in `latex-lab-table.pdf`.

math This adapts math for tagging.

firstaid This contains small adjustments to external packages.

tikz This add support for the `tikz` package.

3 Keys and values

Currently the following keys are implemented for `\DocumentMetadata`:

backend Passes the backend name to expl3. This is needed only if the needed backend can't be automatically determined or if the workflow used requires a special backend.

pdfversion Sets the PDF version explicitly, e.g., `pdfversion=1.7`

uncompress (no value) Forces an uncompressed pdf — mainly for debugging purposes.

lang Explicitly sets the Lang entry in the Catalog, e.g., `lang=de-DE`. If not given the default value used is `en-US`.

pdfstandard Choice key to set the pdf standard. Currently `A-1b`, `A-2a`, `A-2b`, `A-2u`, `A-3a`, `A-3b`, `A-3u`, `A-4`, `A-4E` and `A-4F` are accepted as A-standard. values. The casing is irrelevant, `a-1b` works too. Note that using this key doesn't mean that the document actually follows the standard. \LaTeX can neither ensure nor check all requirements of a standard, and not everything it can do theoretically has already been implemented. When setting an A-standard a color profile is included and the `/OutputIntent` is set and any javascript action in hyperref are suppressed. The `u` variants do not enforce unicode, but they will pass the information to hyperref. The `a` variants do *not* enforce (or even test) a tagged pdf yet.

Beside the A-standards it is also possible to use the values `X-4`, `X-4p`, `X-5g`, `X-5n`, `X-5pg`, `X-6`, `X-6n`, `X-6p` for a PDF/X and `UA-1` and `UA-2` for PDF/UA standard. `UA-2` should only be used together with PDF 2.0. Currently these keys set *only* the relevant XMP-metadata. They do not validate or enforce special requirements (e.g., the UA standards do not automatically activate tagging).

`pdfstandard` can be used more than once to set overlapping standards, e.g: `pdfstandard=A-2b,pdfstandard=X-4,pdfstandard=UA-1`. It is also possible to pass a list like `pdfstandard={UA-2,A-4F}`.

If XMP-metadata are added (see the following key `xmp`) the necessary conformance markers for the standards are set.

More information can be found in the documentation of `l3pdfmeta`.

xmp A boolean, if set to false no XMP metadata are added to the PDF. The initial value is true. Details are described in the documentation of `l3pdfmeta`.

colorprofiles This allows to load icc-colorprofiles. Details are described in the documentation of `l3pdfmeta`.

tagging This key allows to activate, deactivate or partially deactivate the tagging support. It accepts the three values `on`, `off` and `draft`. When used, the key loads the `tagpdf` package and all standard modules of the tagging support that were previously loaded with `testphase=latest`.

- `tagging=on` activates tagging.
- `tagging=off` deactivates in the `class/before` hook the tagging commands, including the `\tagpdfsetup` command. It also deactivates the use of real space chars. This can be reactivated by using `tagging-setup={activate/spaces}`.

- **tagging=draft** leaves the tagging commands active but it deactivates the writing of the structure tree at the end of the compilation. This can save time when drafting a longer document but preserves, e.g., MC-content marker in the PDF stream and warnings and errors from **tagpdf** if the structure is faulty.

tagging-setup This key allows to configure the tagging. It accepts all keys that can also be used in `\tagpdfsetup`; see the **tagpdf** documentation. Additionally, it accepts two keys to extend the list of modules loaded:

modules This key previously allowed to change the list of modules. Starting with the release 2025-11-01 all standard modules are loaded always, so its only use is to load a non-standard module, e.g. **modules=verbatim-af** will load a experiment module changing the verbatim tagging.

extra-modules This key allows to load non-standard modules and starting with the release 2025-11-01 it is an alias of **modules**.

check-tagging-status This key is provided to help to identify packages that are potentially problematic when used with the tagging code. When used (with no value or with the value **listfiles**, it reads the file **latex-tagging-status.ltx** from the **latex-tagging-status** package and then writes at the end of the compilation a report about the compatibility of the class and the packages with the tagging project. It follows the classification done at <https://latex3.github.io/tagging-project/tagging-status>.

This is only a rough overview and a debugging aid, not a final report! Using packages that are classified as incompatible or partially incompatible does not mean that the tagging is necessarily broken. For example, **hyperref** is partially incompatible as the form fields are not properly tagged (this requires the use of the **l3pdffield** package), but in documents without form fields it is unproblematic. (In case of partially-compatible or incompatible packages check the table at <https://latex3.github.io/tagging-project/tagging-status> as it often contains an explanation what is not yet working.)

The package **latex-tagging-status** will be regularly updated to reflect changes in package. Erroneous messages should be reported at <https://github.com/latex3/tagging-project/issues>. It is also possible to create a pull request which updates the data.

testphase This key loaded in older L^AT_EX versions specific sets of modules from the testphase code. Starting with the release 2025-11-01 all modules are loaded automatically by `\DocumentMetadata` and with this change the key lost most of its purpose and is now deprecated. The values **phase-I**, **phase-II**, **phase=III** of the **testphase** key will no longer load different code variants but only activate tagging. The key can still be used to load additional experimental modules, it then works similar to the **modules** and **extra-modules** key and does not automatically activate tagging.

debug This key activates some debug options. It takes a list of key-values as value. Currently the following keys are known:

para with the default and only value **show**. It will activate the **debug/show=para** option of **tagpdf**;

log with the values as described in the documentation of **tagpdf**;

uncompress which does the same as **uncompress** as main key;

pdfmanagement a boolean which allows to deactivate the pdfmanagement;

firstaidoff this accepts a comma lists of keywords and disables the patches related to them. More information can be found in the documentation of pdfmanagement-firstaid;

xmp-export this will export the XMP-metadata to a file `\jobname.xmpi`. With `debug={xmp-export=filename}` the file name can be changed; More information can be found in the documentation of `l3pdfmeta` of the pdfmanagement-testphase bundle;

tagpdf This loads the package tagpdf-debug which enhances various commands from tagpdf with additional debugging options. This can slow down the compilation!

BBox This helps to debug BBox values of graphics, see the documentation of latex-lab-graphic.

References

- [1] Frank Mittelbach and Chris Rowley: *L^AT_EX Tagged PDF — A blueprint for a large project*. <https://latex-project.org/publications/indexbyyear/2020/>

4 The Implementation

```

1 <@@=pdfmanagement>
2 <*code>

3 \RequirePackage{pdfmanagement-testphase}

4 \ExplSyntaxOn\makeatletter

```

4.1 Variables

These variable definitions are currently also done in `ltdocinit`. They can be removed from there once latex-lab has been updated to provide them too.

`\g_pdfmanagement_firstaidoff_clist` A list to store the firstaid code which should be disabled

```

5 \clist_if_exist:NF \g__pdfmanagement_firstaidoff_clist
6 { \clist_new:N \g__pdfmanagement_firstaidoff_clist }

```

(End of definition for `\g__pdfmanagement_firstaidoff_clist`.)

`\g_pdfmanagement_testphase_tl` a `tl` to store the testphase loading code so that we can load them at the end of the command.

```

7 \tl_if_exist:NF \g__pdfmanagement_testphase_tl
8 { \tl_new:N \g__pdfmanagement_testphase_tl }

```

(End of definition for `\g__pdfmanagement_testphase_tl`.)

4.2 Kernel changes with \DocumentMetadata

\@kernel@before@DocumentMetadata

```

9 \cs_new_protected:Npn \@kernel@before@DocumentMetadata
10 {
11   \ifx\Umathcode\@undefined
12     \fontencoding{T1}
13     \renewcommand\encodingdefault{T1}
14   \fi
15 }
```

(End of definition for \@kernel@before@DocumentMetadata. This function is documented on page ??.)

4.3 \DocumentMetadata

\DocumentMetadata

\DocumentMetadata should not be used after \documentclass so we error in this case. It can be used more than once but follow-up calls should not do the initialization code.

```

16 \cs_set_protected:Npn \DocumentMetadata #1
17 {
18   \cs_if_eq:NNTF \documentclass \@twoclasseserror
19   { \msg_error:nn { meta } { after-class } }
20   {
```

Load general format changes

```

21   \@kernel@before@DocumentMetadata
```

The wanted backend must be detected first, we read the init key and then force the loading of the backend. The backend can contain management commands, so the boolean should be set to true first.

```

22     \bool_gset_true:N \g__pdfmanagement_active_bool
23     \keys_set_groups:nnn { document / metadata } {init}{ #1 }
24     %if no backend has been loaded force it now:
25     \str_if_exist:NF \c_sys_backend_str
26     {
27       \sys_load_backend:n {}
28     }
```

Now we load the extra backend code:

```

29     \ExplSyntaxOn\makeatletter
30     \file_input:n {13backend-testphase-\c_sys_backend_str.def}
31     \ExplSyntaxOff\makeatother

32     \pdf_version_gset:n { 2.0 }
```

tagpdf currently requires that the pdf version is set first.

```
33 \keys_set_groups:nnn { document / metadata } {pdf}{ #1 }
```

Load the latex-lab modules:

```
34 \RequirePackage{latex-lab-testphase-latest}
35 \AddToDocumentProperties [document]{tagging}{inactive}
36 \AddToDocumentProperties [document]{tagging/para}{inactive}
```

Process the non-init keys.

```
37 \keys_set_exclude_groups:nnn { document / metadata } { init } { #1 }
```

Finally we setup the language default. This is done after the begindocument hook so that it can pick up settings from babel. If the Catalog dictionary already contains a lang value we do nothing, otherwise we use the value stored in \BCPdata, either the main language (if its exists) or the fall back language. Note: if babel is loaded without a language this gives the language und.

```
38 \g@addto@macro\@kernel@after@begindocument
39 {
40 \pdfdict_get:nnN {g__pdf_Core/Catalog}{Lang}\l__pdfmanagement_tmpa_tl
41 \quark_if_no_value:NT\l__pdfmanagement_tmpa_tl
42 {
43 \tl_if_empty:eTF { \BCPdata{main.language} }
44 { \tl_set:Ne \l__pdfmanagement_tmpb_tl { \BCPdata{language} } }
45 { \tl_set:Ne \l__pdfmanagement_tmpb_tl { \BCPdata{main.language} } }
46 \msg_warning:nne { meta } { lang-missing }{ \l__pdfmanagement_tmpb_tl }
47 \exp_last_unbraced:Ne
48 \AddToDocumentProperties{[document]{lang}{\l__pdfmanagement_tmpb_tl}}
49 \pdfmanagement_add:nne {Catalog} {Lang}{(\l__pdfmanagement_tmpb_tl)}
50 }
51 }
```

\pdfmanagement_add:nnn has collected values in this hook.

```
52 \hook_use_once:n {pdfmanagement/add}
```

Now we redefine \DocumentMetadata so that it only process the keys on any further calls.

```
53 \cs_set_protected:Npn \DocumentMetadata ##1
54 {
55 \keys_set_exclude_groups:nnn { document / metadata } { init } { ##1 }
56 }
```

Load more modules, the testphase code and the firstaid code. The code is only loaded in the first \DocumentMetadata call!

```
57 \g__pdfmanagement_testphase_tl
58 \RequirePackage{pdfmanagement-firstaid}
59 }
60 }
```

(End of definition for \DocumentMetadata. This function is documented on page 1.)

4.4 Tagging status report

Hide our own files

```

61 \clist_map_inline:nn
62 {
63   pdfmanagement-testphase.sty,
64   color-ltx.sty,
65   xcolor-patches-tmp-ltx.sty,
66   tagpdf-base.sty,
67   latex-lab-testphase-latest.sty,
68   tagpdf.sty,
69   tagpdf-mc-code-generic.sty,
70   tagpdf-mc-code-lua.sty,
71   latex-lab-testphase-names.sty,
72   latex-lab-testphase-new-or-2.sty,
73   latex-lab-testphase-block.sty,
74   latex-lab-kernel-changes.sty,
75   latex-lab-testphase-context.sty,
76   latex-lab-testphase-sec.sty,
77   latex-lab-testphase-toc.sty,
78   latex-lab-testphase-minipage.sty,
79   latex-lab-testphase-new-or-1.sty,
80   latex-lab-testphase-graphic.sty,
81   latex-lab-testphase-float.sty,
82   latex-lab-testphase-bib.sty,
83   latex-lab-testphase-text.sty,
84   latex-lab-testphase-marginpar.sty,
85   latex-lab-testphase-title.sty,
86   latex-lab-testphase-table.sty,
87   latex-lab-testphase-math.sty,
88   latex-lab-testphase-firstaid.sty,
89   latex-lab-testphase-tikz.sty,
90   pdfmanagement-firstaid.sty,
91 }
92 {\expandafter\chardef\csname t@status@#1\endcsname8\relax }

93 \tl_new:c {l__tag_status_0_tl}
94 \tl_new:c {l__tag_status_1_tl}
95 \tl_new:c {l__tag_status_2_tl}
96 \tl_new:c {l__tag_status_3_tl}
97 \tl_new:c {l__tag_status_4_tl}
98 \tl_new:c {l__tag_status_-1_tl}
99 \cs_new_protected:Npn\__tag_status_sort:
100 {
101   \clist_map_inline:Nn\g__tag_status_filelist_tl
102   {
103     \filename@parse{##1}
104     \cs_if_exist:cTF { t@status@##1 }
105     {
106       \str_if_eq:onF{\filename@ext}{cls}
107       {
108         \tl_put_right:cn
109         {l__tag_status_\int_use:c { t@status@##1 }_tl}
110         {~##1\iow_newline:}

```



```

111     }
112   }
113   {
114     \str_if_eq:onT{\filename@ext}{sty}
115     {
116       \tl_put_right:cn
117         {l__tag_status_-1_tl}
118         {~~##1\iow_newline:}
119     }
120   }
121 }
122 }
123 \cs_new_protected:Npn \__tag_status_type:nn #1 #2
124 % #1 number, -1 for not listed, #2 title
125 {
126   \iow_term:n{~~#2}
127   \iow_term:n{~~-----}
128   \tl_if_empty:cTF{l__tag_status_#1_tl}
129   {
130     \iow_term:e{~~NONE\iow_newline:}
131   }
132   {
133     \iow_term:e{\tl_use:c{l__tag_status_#1_tl}}
134   }
135 }
136 \cs_new_protected:Npn \__tag_status_log:
137 {
138   \file_if_exist_input:n {latex-tagging-status.ltx}
139   \AddToHookNext{class/before}
140   {
141     \tl_const:Nc \c__tag_current_class_tl{\@currname.\@currentx}
142     \tl_const:Nc \c__tag_status_class_tl
143     {
144       \cs_if_exist:cTF { t@status@\@currname.\@currentx }
145       {
146         \int_case:nn { \int_use:c { t@status@\@currname.\@currentx } }
147         {
148           {0}{unknown}
149           {1}{unsupported}
150           {2}{currently~incompatible}
151           {3}{partially~compatible}
152           {4}{compatible}
153         }
154       }
155       { not~in~the~status~list}
156     }
157   }
158   \AddToHook{begindocument}{\tl_gset_eq:NN \g__tag_status_filelist_tl\@filelist}
159   \AddToHook{enddocument/info}
160   {
161     \iow_term:n{
162       \iow_term:n
163       {=====}
164       \iow_term:n{~~Status~report~of~the~tagging~support}

```

```

165 \iow_term:n{=====}
166 \iow_term:n{~~Details~at~https://latex3.github.io/tagging-project/tagging-status}
167 \iow_term:n{~~Report~erroneous~entries~at~https://github.com/latex3/tagging-
project}
168 \iow_term:n{}
169 \iow_term:n{~~A.~CLASS}
170 \iow_term:n{~*****}
171 \iow_term:n{}
172 \iow_term:e{~~\c__tag_current_class_tl\c_space_tl is~\c__tag_status_class_tl}
173 \iow_term:n{}
174 \iow_term:n{~~B.~PACKAGES,~LIBRARIES,~etc}
175 \iow_term:n{~*****}
176 \iow_term:n{}
177 \__tag_status_sort:
178 \__tag_status_type:nn{1}{1.~Unsupported}
179 \__tag_status_type:nn{2}{2.~Currently~incompatible}
180 \__tag_status_type:nn{3}{3.~Partially~compatible}
181 \__tag_status_type:nn{4}{4.~Compatible}
182 \__tag_status_type:nn{0}{5.~Unknown}
183 \__tag_status_type:nn{-1}{~6. Unclassified~files~with~extension~.sty}
184 \iow_term:n{=====}
185 \iow_term:n{~~End~of~status~report}
186 \iow_term:n{=====}
187 }
188 }

```

4.5 \DocumentMetadata keys

```

189 \keys_define:nn { document / metadata }
190 {
191   backend .choices:nn =
192     { dvipdfmx , dvips , dvisvgm , luatex , pdftex , pdfmode , xdvipdfmx , xetex }
193     {
194       \sys_load_backend:n {#1}
195     },
196   backend .groups:n = { init } ,
197 }
198 \keys_define:nn { document / metadata }
199 {
200   ,check-tagging-status .choice:
201   ,check-tagging-status / off .code:n = {}
202   ,check-tagging-status / listfiles .code:n =
203     {
204       \__tag_status_log:
205     }
206   ,check-tagging-status .default:n = {listfiles}
207 }
208 \keys_define:nn { document / metadata }
209 {
210   ,pdfversion .code:n =
211     {
212       \pdf_version_gset:n { #1 }
213       \AddToDocumentProperties[document]{pdfversion}{#1}
214     }

```

```

215 ,pdfversion .groups:n = { pdf }
216 ,uncompress .code:n =
217     {
218         \pdf_uncompress:
219     }
220 ,uncompress .value_forbidden:n = true
221 ,lang .code:n =
222     {
223         \pdfmanagement_add:nnn {Catalog} {Lang}{(#1)}
224         \AddToDocumentProperties[document]{lang}{#1}
225     }
226 %,xmpmeta .bool_gset:N = \g_pdfmeta_xmp_bool %see pdfmeta unused and undefined for now!
227 % this uses internal command from pdfmeta, it should probably move there ...
228 ,pdfstandard .code:n =
229     {
230         \clist_map_inline:nn{#1}
231         {
232             \keys_set:ne {document / metadata} {_pdfstandard=\str_uppercase:n{##1}}
233         }
234     }
235 ,_pdfstandard .choices:nn =
236     {A-1B,A-2A,A-2B,A-2U,A-3A,A-3B,A-3U,A-4}
237     {
238         \prop_gset_eq:Nc \g__pdfmeta_standard_prop { g__pdfmeta_standard_pdf/#1 _prop }
239         \AddToDocumentProperties [document]{pdfstandard}{#1}
240     }
241 ,_pdfstandard / A-4F .code:n =
242     {
243         \prop_gset_eq:Nc \g__pdfmeta_standard_prop { g__pdfmeta_standard_pdf/A-4F_prop }
244         \AddToDocumentProperties [document]{pdfstandard}{A-4F}
245     }
246 ,_pdfstandard / A-4E .code:n =
247     {
248         \prop_gset_eq:Nc \g__pdfmeta_standard_prop { g__pdfmeta_standard_pdf/A-4E_prop }
249         \AddToDocumentProperties [document]{pdfstandard}{A-4E}
250     }
251 ,_pdfstandard / unknown .code:n =
252     {
253         \msg_error:nnn{pdf}{unknown-standard}{#1}
254     }

```

As the latest set of modules is loaded by default, many testphase keys only activate tagging.

```

255 ,testphase .multichoices:nn =
256     {latest,tagpdf,phase-I,phase-II,phase-III}
257     {
258         \keys_set:nn
259         {document / metadata}
260         {tagging=on}
261     }
262 ,testphase / unknown .code:n =
263     {
264         \tl_gput_right:Nn\g__pdfmanagement_testphase_tl
265         {

```

```

266         \tl_if_empty:eT{\GetDocumentProperties{document/testphase/#1}}
267         {
268             \AddToDocumentProperties [document]{testphase/#1}{loaded}
269             \file_if_exist_input:nF {#1-latex-lab-testphase.ltx}
270             {
271                 \msg_warning:nnn{meta}{latex-lab-pkg-missing}{#1}
272                 \AddToDocumentProperties [document]{testphase/#1}{missing}
273             }
274         }
275     }
276 }
277 }

```

Activating and deactivating tagging after tagpdf has been loaded requires a redefinition of various commands. We store the needed settings in auxiliaries that we can redefine if tagging should be used.

```

\__tag_document_set_tagging_off:
\__tag_document_set_tagging_on;278 \cs_new_protected:Npn \__tag_document_set_tagging_off:
\__tag_document_set_tagging;279 {

```

Avoid warning from non-existing hook label. This can be removed after the next tagpdf update (2025-10-13).

```

280     \sys_if_engine luatex:F
281     { \AddToHook{shipout/firstpage}[tagpdf/space]{} }
282     \tagpdfsetup{activate/mc=false,activate/tree=false,
283                 activate/struct=false,activate/socket=false,
284                 activate/spaces=false,
285                 para/tagging=false,math/setup=}
286     \AddToDocumentProperties [document]{tagging}{inactive}
287     \AddToDocumentProperties [document]{tagging/para}{inactive}
288     \AddToDocumentProperties [document]{tagging/interwordspace}{inactive}

```

We must avoid that a command like `\LaTeX` which contains a `\ResumeTagging` command restarts tagging, so we start a global suspend. Perhaps the commands should even be set to noop.

```

289     \tag_suspend:n {global}

```

We disable the setup command, as various keys assume that the tagging structure is there, see tagging-project issue #994.

```

290     \cs_set_protected:Npn\tagpdfsetup##1{}

```

perhaps, need to test:

```

291     %\cs_set_eq:NN\tag_suspend:n\use_none:n
292     %\cs_set_eq:NN\tag_resume:n \use_none:n
293     }
294     \cs_new_protected:Npn \__tag_document_set_tagging_on:
295     {
296         \tagpdfsetup{activate,para/tagging,activate/spaces}
297         \AddToDocumentProperties [document]{tagging}{active}
298         \AddToDocumentProperties [document]{tagging/para}{active}
299         \AddToDocumentProperties [document]{tagging/interwordspace}{active}

```

300 }

By default tagging is off.

```
301 \cs_new_eq:NN \__tag_document_set_tagging:\__tag_document_set_tagging_off:
302 \AddToHookNext{class/before}{\__tag_document_set_tagging:}
```

(End of definition for __tag_document_set_tagging_off:, __tag_document_set_tagging_on:, and __tag_document_set_tagging:.)

```
303 \keys_define:nn { document / metadata }
304 {
305   ,tagging .choice:,
306   ,tagging / on .code:n =
307   {
308     \cs_set_eq:NN \__tag_document_set_tagging:\__tag_document_set_tagging_on:
309   }
310   ,tagging / off .code:n =
311   {
312     \cs_set_eq:NN \__tag_document_set_tagging:\__tag_document_set_tagging_off:
313   }
314   ,tagging / draft .code:n =
315   {
316     \keys_set:nn { document / metadata }{ tagging=on }
317     \AddToHook{shipout/lastpage}[tagging-setup]{\tagpdfsetup{activate/tree=false}}
318     \DeclareHookRule{shipout/lastpage}{tagging-setup}{before}{tagpdf}
319   }
320   ,tagging-setup .code:n =
321   {
322     \keys_set:nn { document / metadata }{ tagging=on }
323     \tl_gclear:N\g__pdfmanagement_testphase_tl
324     \keys_set_groups:nnn{\__tag/setup}{load}{#1}
325     \AddToHook{class/before}
326     {\keys_set_exclude_groups:nnn {\__tag/setup}{load}{#1}}
327   }
328   ,debug .code:n =
329   {
330     \keys_set:nn { document / metadata / debug } {#1}
331   }
332   ,debug / para .code:n =
333   {
334     \AddToHook
335     {
336       package/tagpdf/after
337     }
338     {
339       \tagpdfsetup{debug/show=para}
340     }
341   }
342   ,debug / log .code:n =
343   {
344     \AddToHook
345     {
346       package/tagpdf/after
347     }
```

```

348         {
349             \tagpdfsetup{debug/log=#1}
350         }
351     }
352     ,debug / tagpdf .code:n =
353     {
354         \AddToHook
355         {
356             package/tagpdf/after
357         }
358         {
359             \RequirePackage{tagpdf-debug}
360         }
361     }
362     ,debug / uncompress .code:n =
363     {
364         \pdf_uncompress:
365     }
366     ,debug / pdfmanagement .bool_gset:N = \g__pdfmanagement_active_bool
367     ,debug / firstaidoff .clist_gset:N = \g__pdfmanagement_firstaidoff_clist
368     ,debug / BBox .code:n =
369     {
370         \AddToHook{package/latex-lab-testphase-graphic/after}
371         { \bool_set_true:N \l__tag_graphic_debug_bool}
372     }
373 }
374 \keys_define:nn{__tag/setup}
375 {
376     ,modules .code:n =
377     {
378         \keys_set:nn { document / metadata }{testphase={#1}}
379     }
380     ,modules .groups:n = { load }
381     ,extra-modules .code:n =
382     {
383         \keys_set:nn { document / metadata }{testphase={#1}}
384     }
385     ,extra-modules .groups:n = { load }
386 }

```

4.6 Messages

```

387 %Ufi is meta the right module name here?
388 \prop_gput:Nnn \g_msg_module_type_prop { meta } { LaTeX }
389 \prop_gput:Nnn \g_msg_module_name_prop { meta } { DocumentMetadata }
390
391 \msg_new:nnn { meta } { after-class }
392 {
393     \token_to_str:N \DocumentMetadata \c_space_tl
394     should-be-used-only-before-\token_to_str:N\documentclass
395 }
396 \msg_new:nnn { meta } { latex-lab-pkg-missing }
397 {
398     LaTeX-lab-package-'\#1'-not-found.
399 }

```

```

400 \msg_new:nnn { meta } { lang-missing }
401     {
402         The~language~has~not~been~set~in~\token_to_str:N
403         \DocumentMetadata.\Setting-it-to~'#1'~as-fallback.
404     }
405 \ExplSyntaxOff\makeatother
406 </code>

```

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