1 Package header

```
1 (*package)
                               2 (@@=yoin)
                              Necessary packages: First, LATEX3 stuff.
                               3 \RequirePackage{expl3,13keys2e,13regex,xparse}
                              From zref bundle, for computing the total number of pages of an article.
                               4 \RequirePackage{zref-totpages}
                              We need the absolute paths. This also means we need -recorder option to pdflatex.
                               5 \RequirePackage[abspath]{currfile}
                              For including PDF files.
                               6 \RequirePackage{pdfpages}
                              Package header.
                               7 \ProvidesExplPackage{yoin}{2016/02/28}{v0.0.1}{Joining articles into issues}
                                  General macros
                              Macros not necessarily related to the package; moreorless an addition to ETFX3.
 \yoin_seq_gappend_clist:Nn
                              Globally append clist #2 to seq #1.
                               8 \seq_new:N \l__yoin_seq_tmpa_seq
                               9 \cs_new_protected: Nn \yoin_seq_gappend_clist: Nn {
                              10
                                    \seq_set_from_clist:Nn \l__yoin_seq_tmpa_seq { #2 }
                              11
                                    \seq_gconcat:NNN #1 #1 \l__yoin_seq_tmpa_seq
                              12 }
                              Read a file #2 containing a key-value list and set the keys for #1. No checks are done here, nothing like comments could be used,
\yoin_keys_set_from_file:nn
                              the keys should be separated by a comma (and spaces of course as needed).
                              13 \tl new:N \l yoin keys tmpa tl
                              14 \cs generate variant: Nn \keys set:nn { nV }
                              15 \cs new protected: Nn \yoin keys set from file:nn {
                                    \tl_set_from_file:Nnn \l__yoin_keys_tmpa_tl { } { #2 }
                              16
                                    \keys set:nV { #1 } \l yoin keys tmpa tl
                              17
                              18 }
         \voin keyval parse from file:nn Read a file #2 containing a key-value list and set the keys for #1. No checks are done here, nothing like comments could be used,
                              the keys should be separated by a comma (and spaces of course as needed).
                              19 \cs_generate_variant:Nn \keyval_parse:NNn { NNV }
                              20 \cs_new_protected:Nn \yoin_keyval_parse_from_file:NNn {
```

```
21 \tl_set_from_file:Nnn \l__yoin_keys_tmpa_tl { } { #3 } 22 \keyval_parse:NNV #1 #2 \l__yoin_keys_tmpa_tl 23 }

msg:_boolean-values-only Message for a non-boolean passed to a bool key.

24 \msg_new:nnn { yoin } { boolean-values-only } 25 { Key ~ '#1' ~ accepts ~ boolean ~ values ~ only.}
```

3 Key-value interface for the package setup

First, we define the variables to store the keys.

```
\g yoin subprocess bool
                         Booleans:
   \g yoin article bool
                         26 \bool new: N \g yoin subprocess bool
   \g yoin dryrun bool
                         27 \bool new: N \g_yoin_article_bool
 \g yoin onlyflags bool
                         28 \bool_new:N \g_yoin_dryrun_bool
  \g yoin onlytags bool
                        29 \bool_new:N \g_yoin_onlyflags_bool
                         30 \bool_new:N \g_yoin_onlytags_bool
      \g_yoin_flags_seq Sequences for flags, tags and their filtering:
      \g_yoin_tags_seq 31 \seq_new:N \g_yoin_flags_seq
  \label{lem:convergence} $$ \g_yoin\_onlyflags\_seq $$ 32 \seq_new:N \g_yoin\_tags\_seq $$
  \label{lem:conjugate} $$ \g_yoin_onlytags_seq $$ 33 \seq_new: N \g_yoin_onlyflags_seq $$
                         34 \seq_new:N \g_yoin_onlytags_seq
     \g_yoin_jobname_tl We can modify what the package considers as the value of \jobname, here's a token list for that:
                         35 \tl_new:N \g_yoin_jobname_tl
                         36 \tl_gset_eq:NN \g_yoin_jobname_tl \c_sys_jobname_str
      msg:_{\sqcup}unknown-tag 37 \msg new:nnnn { yoin } { unknown-flag }
                              { The ~ flag ~ '#1' ~ is ~ unknown ~ to ~ 'yoin'. }
                              { You ~ either ~ misspelled ~ it ~ or ~forgot ~ to ~ declare ~ it. }
                         40 \msg new:nnnn { yoin } { unknown-tag }
                              { The ~ tag ~ '#1' ~ is ~ unknown ~ to ~ 'yoin'. }
                              { You ~ either ~ misspelled ~ it ~ or ~forgot ~ to ~ declare ~ it. }
```

```
\yoin if tag defined:n Conditionals for checking whether a tag/flag was defined.
\yoin if flag defined:n
                         43 \prg_new_protected_conditional:Nnn \yoin_if_tag_defined:n { T, F, TF } {
                               \seq if in:NnTF \g yoin tags seq { #1 } { \prg return true: } { \prg return false: }
                          45 }
                          46 \prg_new_protected_conditional:Nnn \yoin_if_flag_defined:n { T, F, TF } {
                             \seq_if_in:NnTF \g_yoin_flags_seq { #1 } { \prg_return_true: } { \prg_return_false: }
                          48 }
    \ yoin error if tag undefined:n Check whether a tag/flag is defined, if not, issue an error.
   \_yoin_error_if_flag_undefined:n 49 \cs_new_protected:Nn \__yoin_error_if_tag_undefined:n {
                               \yoin_if_tag_defined:nF { #1 } { \msg_error:nnn { yoin } { unknown-tag } { #1 } }
                          51 }
                          52 \cs new protected: Nn \ yoin error if flag undefined:n {
                               \yoin if flag defined:nF { #1 } { \msg error:nnn { yoin } { unknown-flag } { #1 } }
                          54 }
         yoin / general The keys themselves:
                          55 \keys define:nn { yoin / general } {
                          Booleans:
                          56
                                dryrun .bool gset:N = \g yoin dryrun bool,
                               dryrun .initial:n = { false },
                          57
                                article .bool_gset:N = \g_yoin_article_bool,
                          58
                                article .initial:n = { false },
                          59
                                subprocess .bool_gset:N = \g_yoin_subprocess_bool,
                          60
                                subprocess .initial:n = { false },
                          61
                          Keys whose clist values are appended to a seg:
                                defineflags .code:n = \yoin_seq_gappend_clist:Nn \g_yoin_flags_seq { #1 },
                                definetags .code:n = \yoin seq gappend clist:Nn \g yoin tags seq { #1 },
                          A clist key is stored in a seq, also, a corresponding bool is set true. (The point is, if onlyflags/onlytags is not ever set up, we want
                          to know it since we treat it as if we use all flags/tags.)
                          64
                                onlyflags .code:n =
                          65
                                   \seq_gset_from_clist:Nn \g_yoin_onlyflags_seq { #1 }
                                   \bool gset true: N \g yoin onlyflags bool
                          66
                          67
```

```
68
                                  onlytags .code:n =
                            69
                                     \seq gset from clist: Nn \g yoin onlytags seq { #1 }
                                     \bool gset true: N \g yoin onlytags bool
                            70
                            71
                            A key whose value is stored in a token list.
                                  jobname .tl_gset:N = \g_yoin_jobname_tl,
                            73 % A key that allows |\yoinMeta| to be called from within the package options.
                            74 %
                                    \begin{macrocode}
                                  meta .code:n = \yoin yoinmeta:n { #1 },
                            76 }
\ProcessKeysPackageOptions
                           Process key options given to the package. We do not want to process any options given to the class. Whence \ProcessKeysPackageOptions
                            and not \ProcessKeysOptions.
                            77 \ProcessKeysPackageOptions { yoin / general }
             \yoin_setup:n Allow keys to be set later. We define both a LTFX3 interface and an xparse UI wrapper.
                \yoinSetup 78 \cs_new_protected:Nn \yoin_setup:n {
                                 \keys_set:nn { yoin / general } { #1 }
                            80 }
                            81 \NewDocumentCommand \yoinSetup { R[]{} } {
                                  \yoin_setup:n { #1 }
                            83 }
                            4 yoinMeta macro — adding issue's metadata
                 \yoinMeta
          \yoin_yoinmeta:n
                           84 \prop_new:N \l__yoin_yoinmeta_prop
                            85 \cs_new_protected:Nn \__yoin_yoinmeta_storekey:nn {
                                  \prop_put:Nnn \l__yoin_yoinmeta_prop { #1 } { #2 }
                            86
                            87 }
                            88 \cs_new_protected:Nn \__yoin_yoinmeta_storekey:n {
                                  \prop put:Nnn \l yoin yoinmeta prop { #1 } { }
                            90 }
                            91 \cs new protected: Nn \yoin yoinmeta:n {
```

\keyval_parse:NNn __yoin_yoinmeta_storekey:n __yoin_yoinmeta_storekey:nn { #1 }

```
93 }
94 \NewDocumentCommand \yoinMeta { R[]{} } {
     \yoin yoinmeta:n { #1 }
96 }
```

yoinAdd macro — adding articles to the issue

The key-value interface. In this case, we basically only store the keys for each article in a prop. First, an interface for setting the keys for the articles. \voin yoinadd prop:n returns the name of the prop for the given article; no check for existence is done at this place.

\g_yoin_yoinadd_seq A sequence for storing the list of the existing articles. 97 \seq_new:N \g_yoin_yoinadd_seq \yoin yoinadd prop:n \yoin yoinadd prop:n returns the name of the prop for the given article; no check for existence is done at this place. \yoin yoinadd prop:V \yoin yoinadd prop:nn returns property \#2 of article \#1, or \q no value if the property is not set. \yoin yoinadd prop item:nn 98 \cs new:Nn \yoin_yoinadd_prop:n { \yoin_yoinadd_prop_item:Vn g__yoin_article_#1_prop 100 } 101 \cs_generate_variant:Nn \yoin_yoinadd_prop:n { V } 102 \cs_new:Nn \yoin_yoinadd_prop_item:nn { \prop_item:cn { \yoin_yoinadd_prop:n { #1 } } { #2 } 103 104 } 105 \cs_generate_variant:Nn \yoin_yoinadd_prop_item:nn { V }

> For processing \yoinAdd, we first set up a t1 to contain the name of the article, then create the prop, and finally use 13keys to fill in the prop. Note that if an article is added twice, an error is issued, if the error is ignored, the article is not added but the properties are set.

\l yoin yoinadd currentarticle tl A tl that stores the name of the article that is being processed by \yoinAdd.

```
106 \tl new:N \l yoin yoinadd currentarticle tl
```

111 112 }

\ yoin yoinadd storekey:nn Internal macro for storing a key in the prop. The one-parameter variant sets the value of the key empty. \ yoin yoinadd storekey:n 107 \cs_new_protected:\n __yoin_yoinadd_storekey:nn { \prop_gput:cnn { \yoin_yoinadd_prop:V \l__yoin_yoinadd_currentarticle_tl } { #1 } { #2 } 108 109 } 110 \cs_new_protected: Nn __yoin_yoinadd_storekey:n {

5

\prop gput:cnn { \yoin yoinadd prop: V \l yoin yoinadd currentarticle tl } { #1 } { }

\yoin yoinadd:nn The macro \yoinAdd itself. We first set \1 @@ yoinadd currentarticle tl, then check whether the same article has not been processed before (issuing an error in that case and finishing). Then, the article is added in \g_yoin_yoinadd_seq, the prop created, the article's name added in the prop with key article and the keys are set. If the article has a .yoin file in its sub-directory, the key-values in it is added to the prop. If the file does not exist, it means things are wrong (the article should first be set up, before being added to its issue by \yoinAdd).

```
113 \cs_new_protected:Nn \yoin_yoinadd:nn {
      \tl_set:Nn \l__yoin_yoinadd_currentarticle_tl { #1 }
      \seq_if_in:NnTF \g_yoin_yoinadd_seq { #1 } {
115
         \msg error:nnn { yoin } { yoinadd-duplicatearticle } { #1 }
116
117
      } {
118
         \seq_gput_right: Nn \g_yoin_yoinadd_seq { #1 }
         \prop new:c { \yoin yoinadd prop:n { #1 } }
119
         \clist_map_inline:nn { forceopenany, forceopenright, ignore } {
120
            \ yoin yoinadd storekey:nn { ##1 } { 0 }
121
122
123
         \ yoin yoinadd storekey:nn { article } { #1 }
         \keys set:nn { yoin / yoinadd } { #2 }
124
         \file if exist:nTF { #1 / #1 .yoin } {
125
126
            \yoin keyval parse from file:NNn
127
               \ yoin yoinadd storekey:n
128
               \ yoin yoinadd storekey:nn
               { #1 / #1 .yoin }
129
         } {
130
            \msg_error:nnn { yoin } { yoinadd-dotyoinmissing } { #1 }
131
132
133
      }
134 }
135 \NewDocumentCommand \yoinAdd { m O{} } {
      \yoin yoinadd:nn { #1 } { #2 }
136
137
```

msg:, yoinadd-duplicatearticle The error messages: for adding a duplicate article and for adding an article with no #1/#1. yoin file.

```
{\tt msg:\_yoinadd-dotyoinmissing} \ {\tt 138} \ {\tt \msg\_new:nnn} \ \{ \ {\tt yoin} \ \} \ \{ \ {\tt yoinadd-duplicatearticle} \ \}
                                       { The ~ article ~ "#1" ~ has ~ been ~ already ~ processed ~ by ~ \token_to_str:N \yoinAdd ~.}
                                140 \msg new:nnn { yoin } { yoinadd-dotyoinmissing }
                                       { The ~ article ~ "#1" ~ has ~ no ~ file "#1/#1.yoin" ~ and ~ was ~ not ~ properly ~ set ~ up.}
```

yoin_\/\upsimadd The keys here are pretty simple; each defined key just stores its value in the prop. We recall that \#1 is the key and \#\#1 is the value.

```
142 \clist map inline:nn { textualkey } {
      \keys define:nn { yoin / yoinadd } {
143
         #1 .code:n = \__yoin_yoinadd_storekey:nn { #1 } { ##1 },
144
145
      }
146 }
For boolean keys, we create a manual boolean parser.
147 \clist map inline:nn { forceopenany, forceopenright, ignore } {
      \keys_define:nn { yoin / yoinadd } {
         #1 .choice:,
149
         #1 / true .code:n = \__yoin_yoinadd_storekey:nn { #1 } { 1 },
150
         #1 / false .code:n = \__yoin_yoinadd_storekey:nn { #1 } { 0 },
151
152
         #1 / unknown .code:n = \msg_error:nnx { yoin } { boolean-values-only } { \l_keys_key_tl },
     }
153
154 }
However, for the tag key, we additionally check that the tag exists.
155 \keys_define:nn { yoin / yoinadd } {
      tag .code:n =
         \__yoin_error_if_tag_undefined:n { #1 }
157
158
         \_yoin_yoinadd_storekey:nn { tag } { #1 }
159
160 }
```

6 Environment yoinshell

}

}

168

169

\1 yoin yoinshell ignore bool A boolean for storing the ignore key's value.

```
yoin_\/\_yoinshell Key-value interface to yoinshell.

161 \keys_define:nn { yoin / yoinshell } {

If flag is set and onlyflags is set but the flag is not amongst them, the whole yoinshell is ignored (by setting the ignore key).

162 flag .code:n =

163 \__yoin_error_if_flag_undefined:n { #1 }

164 \bool_if:NT \g_yoin_onlyflags_bool {

165 \seq_if_in:NnF \g_yoin_onlyflags_seq { #1 } {

166 \keys_set:nn { yoin / yoinshell } {

167 ignore = true}
```

```
}
                           170
                           171
                            The ignore key sets a boolean
                                 ignore .bool set: N = \l yoin yoinshell ignore bool,
                           173
                                 ignore .initial:n = { false },
                           174 }
             shellesc.sty A reasonable shell escape that should work in both pdflatex and lualatex in TrX Live 2016.
             \ShellEscape 175 \file if_exist:nTF { shellesc.sty } {
      \ yoin yoinshell shellescape:n 176
                                 \RequirePackage { shellesc }
                           177 } {
                           178
                                 \def \ShellEscape #1 { \immediate \write 18 { #1 } }
                           179 }
                           180 \cs_new_protected: Nn \__yoin_yoinshell_shellescape:n {
                                 \ShellEscape { #1 }
                           181
                          182 }
                           183 \cs_generate_variant:Nn \__yoin_yoinshell_shellescape:n { V }
\__yoin_yoinshell_begin:n Environment yoinshell (one key-value argument). We perform some local definitions that should stay local, so we put everything
                           in a group. The keys are set. Then we define the macros — "shell commands". If ignore is set or if subprocess is passed to the
   \__yoin_yoinshell_end:
                           package, these macros are declared to do nothing, otherwise they are simply wrappers to the ETFX3 counterparts.
              {voinshell}
                           184 \cs new protected: Nn \ yoin yoinshell begin:n {
                           185
                                  \group begin:
                                 \keys set:nn { yoin / yoinshell } { #1 }
                           186
                                 \bool if:NT \g yoin subprocess bool {
                           187
                           188
                                    \bool_set_true:N \l_yoin_yoinshell_ignore_bool
                           189
                                 \bool if:NTF \l yoin yoinshell ignore bool {
                           190
                                     \DeclareDocumentCommand \RunForEach { O{} m } { }
                           191
                                     \DeclareDocumentCommand \AutoRunForEach { O{} } { }
                           192
                                     \DeclareDocumentCommand \Run { O{} m } { }
                           193
                           194
                                     \DeclareDocumentCommand \AutoRun { O{} } { }
                                     \DeclareDocumentCommand \WriteMeta { O{} } { }
                           195
                           196
                                 } {
                                     \DeclareDocumentCommand \RunForEach { O{} m } { \voin voinshell runforeach:nn { ##1 } { ##2 } }
                           197
                                     \DeclareDocumentCommand \AutoRunForEach { O{} } { \yoin yoinshell autorunforeach:n { ##1 } }
                           198
                           199
                                     \DeclareDocumentCommand \Run { O{} m } { \voin yoinshell run:nn { ##1 } { ##2 } }
                                     \DeclareDocumentCommand \AutoRun { 0{} } { \yoin yoinshell autorun:n { ##1 } }
                           200
```

```
\DeclareDocumentCommand \WriteMeta { O{} } { \yoin yoinshell writemeta:n { ##1 } }
201
         \yoin yoinshell writemeta:n { }
202
      }
203
204
205 \cs_new_protected: Nn \__yoin_yoinshell_end: {
      \group_end:
207
208 \NewDocumentEnvironment { yoinshell } { O{} } {
      \__yoin_yoinshell_begin:n { #1 }
210 } {
      \__yoin_yoinshell_end:
211
212 }
```

RunForEach 6.1

\l yoin yoinshell runforarticle tag tl First, two tls that will store tags: One for the tag of the article, one that could be passed to \RunForEach that is initially set to \l yoin yoinshell runforeach onlytag tl \q no value.

```
213 \tl_new:N \l__yoin_yoinshell_runforarticle_tag_tl
214 \tl_new:N \l__yoin_yoinshell_runforeach_onlytag_tl
215 \tl_set:Nn \l__yoin_yoinshell_runforeach_onlytag_tl { \q_no_value }
```

yoin_/urunforeach So far, the only key-val passable to \RunForEach is onlytag, which tests for the tag to be declared and passes it to \1_00_yoinshell_runforeach_only

```
216 \keys_define:nn { yoin / runforeach } {
      onlytag .code:n =
217
         \ yoin error if tag undefined:n { #1 }
218
         \tl set:Nn \l yoin yoinshell runforeach onlytag tl { #1 }
219
220
221
```

\ yoin yoinshell runforarticle keyfromprop:nnN This macro lets #3 to the value of property #2 of article #1. It makes it an empty definition if the property is unset.

```
222 \tl_new:N \l__yoin_yoinshell_runforarticle_tmpa_tl
223 \cs_new_protected:Nn \__yoin_yoinshell_runforarticle_keyfromprop:nnN {
      \prop_get:cnN { \yoin_yoinadd_prop:n { #1 } } { #2 } \l__yoin_yoinshell_runforarticle_tmpa_tl
224
      \quark_if_no_value:NTF \l__yoin_yoinshell_runforarticle_tmpa_tl {
         \def #3 {}
226
      } {
227
228
         \let #3 \l__yoin_yoinshell_runforarticle_tmpa_tl
      }
229
230 }
```

\ yoin yoinshell runforeach:nn \RunForEach itself just sets the keys (in a group to make things local) and then calls \@@ yoinshell runforarticle:nn on each article.

```
231 \cs new protected: Nn \yoin yoinshell runforeach:nn {
      \group begin:
233
      \keys set:nn { yoin / runforeach } { #1 }
      \seq_map_inline: Nn \g_yoin_yoinadd_seq { \__yoin_yoinshell_runforarticle:nn { ##1 } { #2 } }
234
      \group end:
235
236 }
```

otherwise nothing is done (the tags do not match). We only extract the prop to publically available macros like \Article, \Jobname etc. (in a group to make this local), and then run the command in shell escape.

```
237 \cs_new_protected:Nn \__yoin_yoinshell_runforarticle:nn {
      \prop_get:cnN { \yoin_yoinadd_prop:n { #1 } } { tag } \l__yoin_yoinshell_runforarticle_tag_tl
239
      \bool if:nT {
240
         \quark_if_no_value_p:N \l__yoin_yoinshell_runforarticle_tag_tl
241
242
         \quark if no value p:N \l yoin yoinshell runforeach onlytag tl
243
244
         \tl if eq p:NN \l yoin yoinshell runforeach onlytag tl \l yoin yoinshell runforarticle tag tl
      }{
245
246
         \group begin:
         \ yoin yoinshell runforarticle keyfromprop:nnN { #1 } { article } \Article
247
         \ yoin yoinshell runforarticle keyfromprop:nnN { #1 } { jobname } \Jobname
248
          \ yoin yoinshell runforarticle keyfromprop:nnN { #1 } { firstpage } \FirstPage
249
         \__yoin_yoinshell_shellescape:n { #2 }
250
251
         \group_end:
252
      }
253 }
254 \cs_generate_variant:Nn \__yoin_yoinshell_runforarticle:nn { VV }
```

AutoRunForEach (undocumented)

```
255 \tl_new:N \l__yoin_yoinshell_autorunforeach_engine_tl
256 \tl_set:Nn \l__yoin_yoinshell_autorunforeach_engine_tl { \q_no_value }
257 \tl_new:N \l__yoin_yoinshell_autorunforeach_command_tl
258 \tl_new:N \l__yoin_yoinshell_autorunforeach_article_tl
259 \cs_new_protected:Nn \yoin_yoinshell_autorunforeach_new_engine:nn {
      \cs_if_exist:cT { __yoin_yoinshell_autorunforeach_engine_preprocess_ #1 : } {
```

```
261
         \msg warning:nnn { yoin } { autorunforeach-duplicate-engine } { #1 }
262
      \cs_new_protected:cn { __yoin_yoinshell_autorunforeach_engine_preprocess_ #1 : } { #2 }
263
264
265 \cs new protected: Nn \yoin yoinshell autorunforeach new variable:n {
      \tl new:c { 1 yoin yoinshell autorunforeach variable #1 tl }
267
      \keys define:nn { yoin / autorunforeach } {
         #1 .tl_set:c = { l__yoin_yoinshell_autorunforeach_variable_ #1 _tl } ,
268
      }
269
270 }
271 \yoin_yoinshell_autorunforeach_new_engine:nn { latex }
      { \tl_set:Nn \l__yoin_yoinshell_autorunforeach_command_tl
         { cd ~ "./\Article" ~ && ~ latex ~ -recorder ~ "./\Jobname" } }
273
274 \yoin_yoinshell_autorunforeach_new_engine:nn { dvips }
      { \tl_set:Nn \l__yoin_yoinshell_autorunforeach_command_tl
276
         { cd ~ "./\Article" ~ && ~ dvips ~ "./\Jobname.dvi" } }
277 \yoin_yoinshell_autorunforeach_new_engine:nn { ps2pdf }
      { \tl_set:Nn \l__yoin_yoinshell_autorunforeach_command_tl
         { cd ~ "./\Article" ~ && ~ ps2pdf ~ "./\Jobname.ps" } }
279
280 \yoin_yoinshell_autorunforeach_new_engine:nn { pdflatex }
281
      { \tl set:Nn \l yoin yoinshell autorunforeach command tl
         { cd ~ "./\Article" ~ && ~ pdflatex ~ -recorder ~ "./\Jobname" } }
283 \yoin yoinshell autorunforeach new engine:nn { lualatex }
      { \tl set:Nn \l yoin yoinshell autorunforeach command tl
285
         { cd ~ "./\Article" ~ && ~ lualatex ~ -recorder ~ "./\Jobname" } }
286 \yoin yoinshell autorunforeach new engine:nn { xelatex }
      { \tl_set:Nn \l__yoin_yoinshell_autorunforeach_command_tl
         { cd ~ "./\Article" ~ && ~ xelatex ~ -recorder ~ "./\Jobname" } }
288
289 \yoin_yoinshell_autorunforeach_new_engine:nn { arara }
290
      { \tl_set:Nn \l__yoin_yoinshell_autorunforeach_command_tl
         { cd ~ "./\Article" ~ && ~ arara ~ "./\Jobname.tex" } }
291
292 \msg_new:nnn { yoin } { autorunforeach-noengine }
      { Engine ~ unspecified ~ for ~ \token_to_str:N \AutoRunForEach . ~ I'm ~ trying ~ 'pdflatex'. }
294 \msg new:nnn { voin } { autorunforeach-duplicate-engine }
      { Engine ~ '#1' ~ defined ~ multiple ~ times. ~ Overwriting ~ the ~ first ~ definition. }
296 \msg new:nnn { yoin } { autorunforeach-unknown-engine }
297
      { Engine ~ '#1' ~ unknown. ~ I'm ~ trying ~ 'pdflatex'. }
298 \keys define:nn { yoin / autorunforeach } {
      onlytag .code:n = \keys_set:nn { yoin / runforeach } { onlytag = { #1 } } ,
299
      engine .tl_set:N = \l__yoin_yoinshell_autorunforeach_engine_tl ,
300
```

```
301
                         302 \cs new protected: Nn \yoin yoinshell autorunforeach:n {
                         303
                               \group begin:
                         304
                               \keys set:nn { yoin / autorunforeach } { #1 }
                               \quark_if_no_value:NT \l__yoin_yoinshell_autorunforeach_engine_tl {
                         305
                                  \msg error:nn { yoin } { autorunforeach-noengine }
                         306
                                  \tl set:Nn \l yoin yoinshell autorunforeach engine tl { pdflatex }
                         307
                         308
                         309
                               \cs_if_exist:cF { __yoin_yoinshell_autorunforeach_engine_preprocess_ \l__yoin_yoinshell_autorunforeach_engine_tl : } {
                                  \msg_error:nnx { yoin } { autorunforeach_unknown-engine } { \l__yoin_yoinshell_autorunforeach_engine_tl }
                         310
                                   \tl_set:Nn \l__yoin_yoinshell_autorunforeach_engine_tl { pdflatex }
                         311
                         312
                               \seq_map_inline: Nn \g_yoin_yoinadd_seq {
                         313
                                  \tl_set:Nn \l__yoin_yoinshell_autorunforeach_article_tl { ##1 }
                         314
                                  \use:c { _ yoin_yoinshell_autorunforeach_engine_preprocess_ \l _ yoin_yoinshell_autorunforeach_engine_tl : }
                         315
                                  \__yoin_yoinshell_runforarticle:VV
                         316
                                     \l__yoin_yoinshell_autorunforeach_article_tl
                         317
                         318
                                     \l__yoin_yoinshell_autorunforeach_command_tl
                         319
                         320
                               \group_end:
                         321
                          6.3
                               Run
\__yoin_yoinshell_run:nn
                         322 \cs_new_protected: Nn \yoin_yoinshell_run:nn {
                         323
                               \group_begin:
                               \keys_set:nn { yoin / run } { #1 }
                         325
                               \let \Jobname \c_sys_jobname_str
                               \__yoin_yoinshell_shellescape:n { #2 }
                         326
                               \group_end:
                         327
                         328 }
                              AutoRun (undocumented)
                         329 \tl_new:N \l__yoin_yoinshell_autorun_engine_tl
                         330 \tl_set:Nn \l__yoin_yoinshell_autorun_engine_tl { \q_no value }
                         331 \tl_new:N \l__yoin_yoinshell_autorun_command tl
                         332 \cs_new_protected:Nn \yoin_yoinshell_autorun_new_engine:nn {
                               \cs_new_protected:cn { __yoin_yoinshell_autorun_engine_preprocess_ #1 : } { #2 }
                         333
```

```
334
335 \cs new protected: Nn \yoin yoinshell autorun new variable:n {
      \tl new:c { l yoin yoinshell autorun variable #1 tl }
337
      \keys define:nn { yoin / autorun } {
338
         #1 .tl set:c = l yoin yoinshell autorun variable #1 tl ,
339
      }
340 }
341 \yoin_yoinshell_autorun_new_engine:nn { pdflatex } {
      \tl_clear:N \l__yoin_yoinshell_autorun_command_tl
343
      \tl_put_right:Nn \l__yoin_yoinshell_autorun_command_tl
         { pdflatex ~ -recorder ~ -jobname ~ "\Jobname }
344
      \tl_put_right:NV \l__yoin_yoinshell_autorun_command_tl
345
         \l__yoin_yoinshell_autorun_variable_suffix_tl
346
      \tl_put_right:Nn \l__yoin_yoinshell_autorun_command tl
347
         { " ~ "\noexpand\PassOptionsToPackage{subprocess, ~ jobname=\Jobname}{yoin}\noexpand\input{\Jobname}" }
348
349 }
350 \yoin_yoinshell_autorun_new_variable:n { suffix }
351 \msg new:nnn { yoin } { autorun-noengine }
     { Engine ~ unspecified ~ for ~ \token to str:N \AutoRun . ~ I'm ~ trying ~ 'pdflatex'. }
353 \msg new:nnn { yoin } { autorun-unknown-engine }
      { Engine ~ '#1' ~ unknown. ~ I'm ~ trying ~ 'pdflatex'. }
354
355 \keys define:nn { yoin / autorun } {
356
      engine .tl set:N = 1 yoin yoinshell autorun engine tl ,
357
358 \cs_new_protected:Nn \yoin_yoinshell_autorun:n {
359
      \group begin:
      \keys_set:nn { yoin / autorun } { #1 }
360
      \quark_if_no_value:NT \l__yoin_yoinshell_autorun_engine tl {
361
         \msg_error:nn { yoin } { autorun-noengine }
362
363
         \tl_set:Nn \l__yoin_yoinshell_autorun_engine_tl { pdflatex }
364
      \cs_if_exist:cF { __yoin_yoinshell_autorun_engine_preprocess_ \l__yoin_yoinshell_autorun_engine_t1 : } {
365
         \msg error:nnx { yoin } { autorun-unknown-engine } { \l_yoin_yoinshell_autorun_engine_tl }
366
         \tl set:Nn \l yoin voinshell autorum engine tl { pdflatex }
367
368
369
      \use:c { yoin yoinshell autorun engine preprocess \l yoin yoinshell autorun engine t1 : }
370
      \let \Jobname \c_sys_jobname_str
      \ yoin yoinshell shellescape: V \l yoin yoinshell autorun command tl
371
372
      \group end:
373 }
```

6.5 WriteMeta

```
\ yoin yoinshell writemeta:n
                   374 \iow new: N \g yoin yoinshell iow
                   375 \cs new protected: Nn \yoin yoinshell writemeta:n {
                   376
                          \group begin:
                   377
                         \yoin_yoinmeta:n { #1 }
                         \iow_open:Nn \g_yoin_yoinshell_iow { \g_yoin_jobname_tl .yoin }
                   378
                         \prop_map_inline:Nn \l__yoin_yoinmeta_prop {
                   379
                             \inv now: Nn \g_yoin_yoinshell_iow { meta-##1 ~ = ~ { ##2 } , }
                   380
                         }
                   381
                   382
                          \iow_close:N \g__yoin_yoinshell_iow
                   383
                          \group_end:
                   384 }
```

7 macro yoinForEach

```
\l yoin yoinforeach article tag tl First, two tls that will store tags: One for the tag of the article, one that could be passed to \yoinForEach that is initially set to
  \l yoin yoinforeach onlytag tl \q_no_value.
                       385 \tl_new:N \l__yoin_yoinforeach_article_tag_tl
                       386 \tl_new:N \l__yoin_yoinforeach_onlytag_tl
                       387 \tl_set: Nn \l__yoin_yoinforeach_onlytag_tl { \q_no_value }
  yoin yoin // yoinforeach So far, the only key-val passable to \yoinForEach is onlytag, which tests for the tag to be declared and passes it to
                        \1 @@ yoinforeach onlytag tl.
                       388 \keys_define:nn { yoin / yoinforeach } {
                              onlytag .code:n =
                       389
                                  \__yoin_error_if_tag_undefined:n { #1 }
                       390
                                 \tl_set:Nn \l__yoin_yoinforeach_onlytag_tl { #1 }
                       391
                       392
                       393 }
```

```
400
                                    \let #3 \l yoin yoinforeach tmpa tl
                                 }
                          401
                          402 }
\ yoin yoinforeach article metaitem:nnN This macro lets #3 to the value of property #2 of article #1. It makes it an empty definition if the property is unset.
                          403 \cs new:Nn \ yoin yoinforeach article metaitem:nn {
                                 \yoin yoinadd prop item:nn { #1 } { article-#2 }
                          405 }
 \ yoin yoinforeach:nn \yoinforEach itself just sets the keys (in a group to make things local) and then calls \@@_yoinforeach_article:nn on each article.
                          406 \cs_new_protected: Nn \yoin_yoinforeach:nn {
                          407
                                 \group_begin:
                                 \keys_set:nn { yoin / yoinforeach } { #1 }
                          408
                                 \seq_map_inline: Nn \g_yoin_yoinadd_seq { \__yoin_yoinforeach_article:nn { ##1 } { #2 } }
                          409
                          410
                                 \group_end:
                          411 }
    \ yoin yoinshell runforarticle:m If the tag passed to onlytag of \RunForEach is identical to the tag of the article or if any of them is not set, we do what should be done,
                           otherwise nothing is done (the tags do not match). We only extract the prop to publically available macros like \Article, \Jobname
                           etc. (in a group to make this local), and then run the command in shell escape.
                          412 \cs new protected: Nn \ yoin yoinforeach article:nn {
                                 \prop get:cnN { \yoin yoinadd prop:n { #1 } } { tag } \l yoin yoinforeach article tag tl
                          413
                          414
                                 \bool if:nT {
                          415
                                     \quark if no value p:N \l yoin yoinforeach article tag tl
                          416
                          417
                                     \quark_if_no_value_p:N \l__yoin_yoinforeach_onlytag_tl
                                     ш
                          418
                                    \tl if eq p:NN \l__yoin_yoinforeach_onlytag_tl \l__yoin_yoinforeach_article_tag_tl
                          419
                          420
                                 }
                                 {
                          421
                          422
                                     \group_begin:
                                    \DeclareDocumentCommand \Meta { m } { \__yoin_yoinforeach_article_metaitem:nn { #1 } { ##1 } }
                          423
                                    \__yoin_yoinforeach_article_keyfromprop:nnN { #1 } { article } \Article
                          424
                                    \__yoin_yoinforeach_article_keyfromprop:nnN { #1 } { jobname } \Jobname
                          425
                                    \__yoin_yoinforeach_article_keyfromprop:nnN { #1 } { firstpage } \FirstPage
                          426
                                    #2
                          427
                          428
                                     \group_end:
                          429
                                 }
```

430 }

\yoinForEach One optional key-val argument, one mandatory argument — the text to be typeset.

```
431 \NewDocumentCommand \yoinForEach { 0{} +m } {
432 \yoin_yoinforeach:nn { #1 } { #2 }
433 }
```

8 Article setting stuff (undocumented)

Information to be stored in an auxiliary file.

```
434 \tl_new:N \l__yoin_article_tmpa_tl
435 \seq_new:N \l__yoin_article_tmpa_seq
437 \cs new protected: Nn \ yoin article write keyval:nn {
      \iow_now:Nn \g__yoin_article_dotyoin_iow { #1 ~ = ~ { #2 } , }
439 }
440 \cs_generate_variant: Nn \__yoin_article_write_keyval:nn { nx, nV }
441
442 \cs_new_protected: Nn \yoin_article_write_meta:nn {
      \__yoin_article_write_keyval:nn { article-#1 } { #2 }
444 }
445
446 \cs_new_protected:Nn \yoin_article_write: {
447
      \__yoin_article_write_keyval:nV { jobname } \c_sys_jobname_str
      \__yoin_article_write_keyval:nx { totpages } { \ztotpages }
448
      \__yoin_article_write_keyval:nV { currdir } \l_yoin_article_currdir_tl
449
      \ yoin article write keyval:nx { firstpage } { \int use:N \l yoin article firstpage int }
450
451 }
452
453 \prop new:N \l yoin article read prop
454
455 \cs new protected: Nn \yoin article read put:nn {
456
      \prop put:Nnn \l yoin article read prop { #1 } { #2 }
457
458 \cs_generate_variant:Nn \yoin_article_read_put:nn { V }
459
460 \int_new:N \l_yoin_article_firstpage_int
461 \int_set:Nn \l_yoin_article_firstpage_int { 1 }
462
463 \keys define:nn { yoin / toarticle } {
```

```
firstpage .code:n =
464
465
         \int set:Nn \l yoin article firstpage int { #1 }
466
         \yoin article read put:nn { firstpage } { #1 }
467
468
469
      parent .code:n =
         \file if exist:nT { ../ #1 .yoin } {
470
            \yoin_keys_set_from_file:nn { yoin / toarticle } { ../ #1 .yoin }
471
472
473
         \yoin_article_read_put:nn { parent } { #1 }
474
475
      unknown .code:n =
476
         \yoin_article_read_put:Vn \l_keys_key_tl { #1 }
477
478
479 }
480
481 \bool_new:N \g__yoin_article_read_bool
483 \cs_new_protected: Nn \yoin_article_read: {
484
      \bool if:NF \g voin article read bool {
         \file_if_exist:nT { ../ \l_yoin_article_currdir_tl .yoin1 } {
485
            \yoin_keys_set_from_file:nn { yoin / toarticle } { ../ \l_yoin_article_currdir_tl .yoin1 }
486
         }
487
488
      \bool gset true: N \g yoin article read bool
489
490 }
491
492 \cs_new:Nn \yoin_article_read_meta:n {
493
      \prop_item:Nn \l__yoin_article_read_prop { meta-#1 }
494
495
496 \cs_new_protected:Nn \yoin_article_read_meta_gset_tl_default:Nnn {
      \prop_get:NnNTF \l__yoin_article_read_prop { meta-#2 } \l__yoin_article_tmpa_t1 {
497
498
         \tl_gset_eq:NN #1 \l__yoin_article_tmpa_tl
      } {
499
500
         \tl_gset:Nn #1 { #3 }
501
      }
502 }
503
```

```
504 \NewDocumentCommand \yoinArticleMeta { m } {
      \yoin article read meta:n { #1 }
506 }
507
508 \tl new:N \l yoin article currdir tl
509 \cs generate variant: Nn \regex extract all:nnN { nV }
510 \cs new protected: Nn \yoin article getcurrdir: N {
      \tl_set:Nx \l__yoin_article_tmpa_tl { \currfileabsdir / }
      \regex_extract_all:nVN { /([^/][^/]+|[^/.]) } \l__yoin_article_tmpa_tl \l__yoin_article_tmpa_seq
512
513
      \seq_get_right:NN \l__yoin_article_tmpa_seq #1
514 }
515
516 \iow_new:N \g__yoin_article_dotyoin_iow
517 \bool_if:NT \g_yoin_article_bool {
      \yoin_article_getcurrdir:N \l_yoin_article_currdir_tl
      \iow_open:Nn \g__yoin_article_dotyoin_iow { \l_yoin_article_currdir_tl .yoin }
      \yoin_article_read:
520
521
      \AtBeginDocument {
         \setcounter { page } { \l_yoin_article_firstpage_int }
522
523
         \yoin article write:
524
      }
525 }
```

9 yoinProcess

```
msg:__forceopenanyright Error message for an article having both forceopenany and forceopenright set.

526 \msg_new:nnn { yoin } { forceopenanyright }

527 { The ~ article ~ '#1' ~ has ~ both ~ 'forceopenany' ~ and ~ 'forceopenright' ~ keys ~ set. }

\text{\text{yoin_yoinprocess:n}}

The key macro of the package, to some sense. It takes care of the page numbering of the articles, proper placement of stuff in twoside environment, etc.

528 \cs_new_protected:Nn \yoin_yoinprocess:n {

Set the appropriate keys (this may be changed later and moved to yoin/general keys.

529 \keys_set:nn { yoin / yoinprocess } { #1 }

Finish the current page if it's started.

530 \clearpage
```

Go to the right page number. This depends on two parameters, cleardoublepage and setpagenumber, the dependence is explained in each of the 4 cases.

```
531 \bool_if:NTF \l__yoin_yoinprocess_cleardoublepage_bool {
532 \bool_if:NTF \l__yoin_yoinprocess_setpagenumber_bool {
```

Case cleardoublepage, setpagenumber. In this case, an empty page is added as necessary to keep the parity of page numbers. For instance, if setpagenumber=110 and last page number is 4, an empty page is added so that there are no two consecutive even pages. The check is on the parity of the sum of the two numbers. The macro $_yoin_yoin_process_clearonepage$: uses the code of $_yoin_yoin_process_clearonepage$ uses the code of $_$

```
\int_if_odd:nT { \value { page } + \l__yoin_yoinprocess_setpagenumber_int } {

\_yoin_yoinprocess_clearonepage:

}

\setcounter { page } { \int_use:N \l__yoin_yoinprocess_setpagenumber_int }

}
```

Case cleardoublepage, nosetpagenumber. We simply do a cleardoublepage. Note that __yoin_yoinprocess_cleardoublepage: modifies the value of \g_@@_page_int in a useless way at this place, but we will override the value anyway.

```
538 \__yoin_yoinprocess_cleardoublepage:
539 }
540 } {
```

Case nocleardoublepage, setpagenumber. We simply set the page number.

Case nocleardoublepage, nosetpagenumber. No adjustment is needed in this case.

```
544 \prg_do_nothing:
545 }
546 }
```

Here, the loop through the articles starts. First, set the internal counter for the page number; this is necessary because if the output of the process is suppressed by the key output=false, we need to keep track of the page number manually.

```
547 \int_gset:Nn \g__yoin_page_int { \value { page } }
548 \seq_map_inline:Nn \g_yoin_yoinadd_seq {
```

Handing of even/odd/pages. First, issue an error if both addarticle/forceopenany and addarticle/forceopenright are set.

```
\msg error:nnn { yoin } { forceopenanyright } { ##1 }
             555
             556
              Then, we call cleardoublepage (our internal variant) if: either forceopenright is true; or openright is true and forceopenany is
             557
                       \bool if:nT {
                          \int compare p:nNn { \yoin yoinadd prop item:nn { ##1 } { forceopenright } } = { 1 }
             558
             559
                             \l__yoin_yoinprocess_openright_bool
             560
             561
                             \int_compare_p:nNn { \yoin_yoinadd_prop_item:nn { ##1 } { forceopenany } } = { 0 }
             562
             563
                       } {
             564
                           \__yoin_yoinprocess_cleardoublepage:
             565
             566
              If output is true, we use \includepdf to include the PDF of the article.
                       \bool_if:NT \l__yoin_yoinprocess_output_bool {
             567
                          \includepdf [ pages = - ] { ##1 / \yoin_yoinadd_prop_item:nn { ##1 } { jobname } .pdf }
             568
             569
              Into file ./<articlename>.yoin1 we save the data to be transferred to the article: the first page number (possibly 1 if alwayspageone
              key is set) and the name of the this document.
                       \iow_open: Nn \g__yoin_yoinprocess_iow { ##1 .yoin1 }
             570
                       \bool_if:NTF \l__yoin_yoinprocess_alwayspageone_bool {
             571
                          \iow_now:Nx \g__yoin_yoinprocess_iow { firstpage ~ = ~ { 1 } , }
             572
                       } {
             573
                          \iow_now:Nx \g__yoin_yoinprocess_iow { firstpage ~ = ~ { \int_use:N \g__yoin_page_int } , }
             574
             575
                       \iow_now:Nx \g__yoin_yoinprocess_iow { parent ~ = ~ { \jobname } , }
             576
             577
                       \iow_close:N \g__yoin_yoinprocess_iow
              Update our internal page counter.
                       \int_gadd: Nn \g__yoin_page_int { \yoin_yoinadd_prop_item:nn { ##1 } { totpages } }
             578
             579
                   }
             580 }
\voinProcess Public wrapper around the LATEX3 version.
             581 \DeclareDocumentCommand \yoinProcess { 0{} } { \yoin yoinprocess:n { #1 } }
```

```
\g voin page int A private counter for tracking the page numbers, and an output stream for writing to .yoin1 files.
\g__yoin_yoinprocess_iow 582 \int_new:N \g__yoin_page_int
                            583 \iow_new:N \g__yoin_yoinprocess_iow
   \ yoin yoinprocess cleardoublepage: If output is true, issue \cleardoublepage. Since this macro is always called after a page is finished (either after \includepdf or
                             \clearpage), to correct the private page counter, we only need to round its value up to an odd number.
                            584 \cs new protected:Nn \ yoin yoinprocess cleardoublepage: {
                            585
                                   \bool if:NT \l yoin yoinprocess output bool { \cleardoublepage }
                                  \int if even:nT { \g voin page int } { \int gincr:N \g voin page int }
                            586
                            587
     \ yoin yoinprocess clearonepage: Clear exactly one page. Code borrowed from LaTeX 2 kernel's \cleardoublepage.
                            588 \cs new protected: Nn \ yoin yoinprocess clearonepage: {
                            589
                                   \bool if:NT \l yoin yoinprocess output bool {
                            590
                                      \hbox {}\newpage \if@twocolumn \hbox {}\newpage \fi
                            591
                            592
                                   \int gincr:N \g voin page int
                            593 }
\l yoin yoinprocess cleardoublepage bool Booleans and counters for values of the keys defined below.
     \l__yoin_yoinprocess_output_bool 594 \bool_new:N \l__yoin_yoinprocess_cleardoublepage_bool
   \l__yoin_yoinprocess_openright_bool 595 \bool_new:N \l__yoin_yoinprocess_output_bool
 \l__yoin_yoinprocess_alwayspageone_bool 596 \bool_new:N \l__yoin_yoinprocess_openright_bool
 \l__yoin_yoinprocess_setpagenumber_bool 597 \bool new:N \l__yoin_yoinprocess_alwayspageone_bool
 \l__yoin_yoinprocess_setpagenumber_int 598 \bool_new:N \l__yoin_yoinprocess_setpagenumber_bool
                            599 \int_new:N \l__yoin_yoinprocess_setpagenumber_int
      yoin_\/uyoinprocess Keys for yoinprocess: several boolean keys (including openany as the negation of openright), and setpagenumber, taking as a value
                            either a number or false (if a number is input, it is stored in a counter with the appropriate boolean set true).
                            600 \keys define:nn { yoin / yoinprocess } {
                            601
                                   cleardoublepage .bool_set:N = \l__yoin_yoinprocess_cleardoublepage_bool ,
                            602
                                   cleardoublepage .initial:n = { false },
                            603
                                   output .bool_set:N = \l__yoin_yoinprocess_output_bool ,
                                   output .initial:n = { true },
                            604
                            605
                                   openright .bool_set:N = \l__yoin_yoinprocess_openright_bool ,
                                   openany .bool set inverse:\mathbb{N} = 1 yoin yoinprocess openright bool,
                            606
                            607
                                   openright .initial:n = { false },
```

```
alwayspageone .bool_set:N = \l__yoin_yoinprocess_alwayspageone_bool ,
608
      alwayspageone .initial:n = { false },
609
      setpagenumber .code:n =
610
         \str_if_eq:nnTF { #1 } { false } {
611
            \bool_set_false:N \l__yoin_yoinprocess_setpagenumber_bool
612
         } {
613
            \bool_set_true:N \l__yoin_yoinprocess_setpagenumber_bool
614
            \int_set:Nn \l__yoin_yoinprocess_setpagenumber_int { #1 }
615
         }
616
617
618
      setpagenumber .initial:n = { false },
619 }
```

10 Experimental