

TeXfrWpxml Group

John D. Baker

<https://github.com/bakerjd99/jacks/blob/master/texfrwpxml/TeXfrWpxml.ijs>

SHA-256: d0d154edfb2d80aeaa9559f14c40f37e4c94290e426273c8f521466e56a92e8c

January 17, 2023

Contents

TeXfrWpxml Overview	2
TeXfrWpxml Interface	2
TeXfrWpxml Notes	2
TeXfrWpxml Source Code	4
=: Index	56

TeXfrWpxml Overview

TeXfrWpxml is a J script that that extracts all published blog postings from WordPress export XML files and converts them, using [pandoc](#), to \LaTeX and markdown files that are then used to build PDF, EPUB and MOBI versions of a blog.

Using TeXfrWpxml is described in a series of blog posts:

1. <https://analyzethedatanotthedrive1.org/2012/02/11/wordpress-to-latex-with-pandoc-and-j-prerequisites-part-1/>
2. <https://analyzethedatanotthedrive1.org/2012/02/18/wordpress-to-latex-with-pandoc-and-j-latex-directories-part-2-2/>
3. <https://analyzethedatanotthedrive1.org/2012/02/25/wordpress-to-latex-with-pandoc-and-j-using-texfrwpxml-ijs-part-3/>

TeXfrWpxml Interface

BlogHashes	[12]	<i>update blog hashes</i>
FixBaddown	[12]	<i>attempt to convert *.baddown files to *.markddown</i>
LatexFrWordpress	[14]	<i>experimental conversion of Wordpress XML to LaTeX</i>
MainMarkdown	[16]	<i>assembles *.markdown files in EPUB directory in a master file</i>
MarkdownFrLatex	[17]	<i>converts edited LaTeX post files to image free markdown</i>
countYearposts	[25]	<i>adds post counts to table of content lines</i>

TeXfrWpxml Notes

TeXfrWpxml is at the mercy of WordPress's XML export format. This format has changed, without warning, many times during the last decade. Most changes do not impact TeXfrWpxml but the last two years I've hit changes that do. This is a sign that TeXfrWpxml is nearing the end of it's life. I've been thinking about modifying or replacing the program but if I take such a step I will rethink my use of WordPress. The service is not entirely friendly to technical material, and is lagging well behind competitors in support of programmer friendly features like defining your our source code highlighting. For now I will note the changes that force me to tweak TeXfrWpxml if I see too many to forgive I will revisit this issue.

1. 20apr01 CDATA now used for blog post titles.

TeXfrWpxml Source Code

```

NB. *TeXfrWpxml s-- LaTeX source from WordPress export XML.
NB.
NB. verbatim: see the following
NB.
NB. source (this) script
NB. https://github.com/bakerjd99/jacks/blob/master/tefrwpxml/TeXfrWpxml.ijs
NB.
NB. https://github.com/bakerjd99/jacks/blob/master/tefrwpxml/wordpressstolatemwith2374.pdf
NB. https://github.com/bakerjd99/jacks/blob/master/tefrwpxml/wordpressstolatemwith2456.pdf
NB. https://github.com/bakerjd99/jacks/blob/master/tefrwpxml/wordpressstolatemwith2456.pdf
NB.
NB. interface word(s):
NB. -----
NB. BlogHashes      - update blog hashes
NB. FixBaddown      - attempt to convert *.baddown files to *.markddown
NB. LatexFrWordpress - experimental conversion of Wordpress XML to LaTeX
NB. MainMarkdown    - assembles *.markdown files in EPUB directory in a master file
NB. MarkdownFrLatex - converts edited LaTeX post files to image free markdown
NB. countYearposts  - adds post counts to table of content lines
NB.
NB. author:  John D. Baker
NB. created: 2012feb10
NB. -----
NB. 12feb24 (MarkdownFrLatex) added
NB. 12feb27 (FixBaddown, MainMarkdown) added

```

NB. 12feb29 (blogings) added
NB. 12jun28 (sortonpublishdate) added - publish order not always post id
NB. 12oct08 changed (texFrhtml) to process pandoc highlighted source
NB. 13dec20 save copy in GitHub (jacks) repository
NB. 15may06 (BlogHashes) added
NB. 17may13 (LATEXFIGURETEMPLATES) added
NB. 17sep29 use J 8.06 sha hash functions - removes need for external dll
NB. 20jul11 (BlogHashes) adjusted to track xhtml version
NB. 20sep12 (mdfootnotes) added to prefix markdown footnotes with post number
NB. 22mar29 (filenamesFrtd) adjusted to extract titles from new <!CDATA['s
NB. 22jul19 (countYearposts) added

```

require 'task'
coclass 'TeXfrWpxml'

NB.*dependents
NB. declared global here to avoid confusing
NB. following HTML and LaTeX names with J names
NB. (*):= EPUBAMBLE EPUBFILE EPUBFRWPDIR HTMLREPS LATEXFIGURETEMPLATES LSTLISTINGHDR LSTLISTINGEND
NB. (*):= MARKDOWNFILE TEXPREAMBLE TEXFRWPDIR TEXINCLUSIONS TEXSECTIONTITLE TEXWRAPFIGURE TEXROOTFILE

NB. profile & require words (*):= IFIOS UNAME

NB. dll/so is machine/os specific - assumes jqtk 8.02 or later is installed
NB. OPENSSSL=: ;(IFIOS + (;'Win Linux Android Darwin') i. <UNAME) { 'libeay32.dll '; (2 $ <'libssl.so ');
>..>(2 $ <'libssl.dylib ')

```

```

NB. call dll
NB. cd=: 15!:0
NB. sslsha1=: (OPENSSL , ' SHA1 > + x *c x *c')&cd
NB.*enddependents

EPUBAMBLE=: 0 : 0
% Analyze the Data not the Drivel
% John D. Baker

)

NB. name of generated EPUB file
EPUBFILE=: 'bm.epub'

NB. root EPUB from LaTeX directory
EPUBFRWPDIR=: 'c:/pd/blog/wp2epub/'

NB. XML CDATA encoding and replacement for special characters
NB. stored in this form to hide the characters from web browsers
HTMLREPS=: 35 38 108 116 59 35 60 35 38 103 116 59 35 62 35 38 113 117 111 116 59 35 34 35 38 97 109 112 5
>..>9 35 38
HTMLREPS=: HTMLREPS{a.

NB. default lstlisting source block header
LSTLISTINGHDR=: 0 : 0
\begin{lstlisting}[frame=single,framerule=0pt,label=lst:~~~LSTLABEL~~~,
caption={source caption}]

```

```

)

NB. default lstlisting source block terminator
LSTLISTINGEND=: '\end{lstlisting}'

NB. name of generated *.markdown file
MARKDOWNFILE=: 'bm.markdown'

NB. name of LaTeX preamble file
TEXPREAMBLE=: 'bmamble.tex'

NB. root LaTeX from WordPress XML directory
TEXFRWPDIR=: 'c:/pd/blog/wp2latex/'

NB. immediate graphics subdirectory name, typically: inclusions
TEXINCLUSIONS=: 'inclusions'

NB. main LaTeX root file
TEXROOTFILE=: 'bm.tex'

NB. LaTeX post section title template
TEXSECTIONTITLE=: 0 : 0
\subsection*{\href{~~~POSTURL~~~}{~~~TITLETEXT~~~}}
\addcontentsline{toc}{subsection}{~~~TITLETEXT~~~}
)

NB. LaTeX wrapped figure template(s)

```

```

TEXWRAPFIGURE=: 0 : 0
%\captionsetup[floatingfigure]{labelformat=empty}
%\begin{figure}[htbp]
%\begin{floatingfigure}[l]{0.25\textwidth}
%\centering
%\includegraphics[width=0.23\textwidth]{~~~IMGRAPHICFILE~~~}
%\caption{~~~IMCAPTION~~~}
%\label{fig:~~~IMLABEL~~~}
%\end{floatingfigure}
%\end{figure}
)

```

```

LATEXFIGURETEMPLATES=: 0 : 0

```

```

% standard floating figure
% \captionsetup[figure]{labelformat=empty}
% \begin{figure}[htbp]
% \centering
% \href{}{\includegraphics[width=0.50\textwidth]{} }
% \caption{}
% \label{fig:????x0}
% \end{figure}

```

```

% captions beside figure
% \captionsetup[figure]{labelformat=empty}
% \begin{SCfigure}
% \centering

```



```
% \href{}\includegraphics[width=0.40\textwidth]{}
% \caption{}
% \label{fig:???x0}
% \end{SCfigure}
```

```
% wrapped figure - outer size > inner size
% \captionsetup[floatingfigure]{labelformat=empty}
% \begin{floatingfigure}[l]{0.23\textwidth}
% \centering
% \href{}\includegraphics[width=0.22\textwidth]{}
% \caption{}
% \label{fig:???x0}
% \end{floatingfigure}
)
```

*NB.*end-header*

NB. file extension given to tex files that do not convert to markdown
 BADDOWNEXT=: '.baddown'

NB. title marker must be an alphabetic string that is untouched by LaTeX
 BEGINTITLE=: 'BEWPTITLE'

NB. WordPress source code addon begin/end delimiters
 BESOURCEDELS=: <;._1 '|[sourcecode |[/sourcecode]'

NB. pandoc highlighted <pre> source block begin/end delimiters
 BESOURCEPREDELS=: <;._1 '|<pre class="sourceCode|</pre>'

NB. carriage return character

CR=: 13{a.

NB. carriage return line feed character pair

CRLF=: 13 10{a.

NB. maximum length of alpha only part of file name

FILETITLELEN=: 20

NB. HTML file extension

HTMLTEXT=: '.html'

NB. interface words (IFACEWORDSTeXfrWpxml) group

IFACEWORDSTeXfrWpxml=: <;._1 ' BlogHashes FixBaddown LatexFrWordpress MainMarkdown MarkdownFrLatex countYea
>..>rposts'

NB. substitute for WordPress \$latex ... \$ blocks - must be untouched by latex

LATEXFRAGMARK=: 'LLLATEXFRAGGG'

NB. line feed character

LF=: 10{a.

NB. extension of markdown text files

MARKDOWNEXT=: '.markdown'

NB. markdown post/section prefix

MDSECTIONPFX=: ''

NB. pandoc shell command prefix

PANDOC CMD=: 'pandoc -o '

NB. root words (ROOTWORDSTeXfrWpxml) group

ROOTWORDSTeXfrWpxml=: <;_1 ' BlogHashes FixBaddown IFACEWORDSTeXfrWpxml LatexFrWordpress MainMarkdown Mark
>..>downFrLatex ROOTWORDSTeXfrWpxml SetTeXfrWpxmlPaths blogimgs countYearposts postfiles posttex showpass uedp
>..>osts'

NB. placeholder substitute for WordPress source blocks - must be untouched by LaTeX

SOURCEBLOCKMARK=: 'SSSOURCEBLOCKEEE'

NB. placeholder substitute for pandoc highlighted <pre> source blocks

SOURCEPREMARK=: 'SSSSOURCEPREBEEE'

*NB. temporary *.tex file - choose name to avoid clashes*

TEMPTEXTFILE=: 'temp.tex'

NB. LaTeX file extension

TEXEXT=: '.tex'

NB. temporary HTML file

TFWTEMPHTML=: 'temp.html'

NB. wget shell command prefix

WGETCMD=: 'wget --no-clobber --no-check-certificate --output-document='

BlogHashes=: 3 : 0

*NB.*BlogHashes v-- update blog hashes.*

NB.

NB. monad: BlogHashes uuIgnore

texpath=. 'c:/pd/blog/wp2latex/'

hash=. ctl ;"1 ' ' ,&.> sha1dir texpath,'*.pdf'

hash=. hash, LF, ctl ;"1 ' ' ,&.> sha1dir texpath,'*.tex'

(toJ hash) write texpath,'bmpdfsha1.txt'

mdpath=. 'c:/pd/blog/wp2epub/'

hash=. ctl ;"1 ' ' ,&.> sha1dir mdpath,'*.epub'

hash=. hash, LF, ctl ;"1 ' ' ,&.> sha1dir mdpath,'*.mobi'

hash=. hash, LF, ctl ;"1 ' ' ,&.> sha1dir mdpath,'*.markdown'

(toJ hash) write mdpath,'bmepubsha1.txt'

xhtmlpath=. 'c:/pd/blog/wp2epub/xhtmll/'

hash=. ctl ;"1 ' ' ,&.> sha1dir xhtmlpath,'*.xhtml'

hash=. hash, LF, ctl ;"1 ' ' ,&.> sha1dir xhtmlpath,'*.css'

hash=. hash, LF, ctl ;"1 ' ' ,&.> sha1dir xhtmlpath,'*.ncx'

(toJ hash) write xhtmlpath,'bmexhtmlsha1.txt'

)

FixBaddown=: 3 : 0

*NB.*FixBaddown v-- attempt to convert *.baddown files to *.markddown
NB.*

NB. monad: FixBaddown uuIgnore

NB. dyad: clDirectory FixBaddown uuIgnore

EPUBFRWPDIR FixBaddown y

:

epubdir=. x

*NB. collect any *.baddown files*

if. #files=. 0 {"1 (1!:0) EPUBFRWPDIR,'*',BADDOWNEXT do.

files=. sortonid (<epubdir) ,&.> files

outinext=. MARKDOWNEXT;TEXEXT

fixed=. ''

for_file. files do.

tex=. rmLatexGraphics read file=. ;file

texfile=. (t!slash jpathsep epubdir),TEMPTEXFILE

(utf8 tex) write texfile

mdown=. outinext pandoc texfile

if. 0=#allwhitetrim mdown do.

smoutput 'no markdown again -> ',file

else.

fixed=. fixed,<file [ferase file

mdown write epubdir,(justfile@winpathsep file),MARKDOWNEXT

end.

```

    outinext cleartemps texfile
end.
1;fixed
else.
    1;'no *',BADDOWNEXT,' file(s)'
end.
)

```

LatexFrWordpress=: 3 : 0

```

NB.*LatexFrWordpress v-- experimental conversion of Wordpress XML
NB. to LaTeX.
NB.
NB. monad: (iaRc;blcl) =. LatexFrWordpress clPathFileXML
NB.
NB. NB. window/linux
NB. LatexFrWordpress 'c:/pd/blog/wordpress/analyzethedatanotthedrivel.wordpress.xml'
NB. LatexFrWordpress '/home/john/pd/blog/wordpress/analyzethedatanotthedrivel.wordpress.xml'
NB.
NB. dyad: (iaRc;blcl) =. (clRoot;clPreamble;clDir;clIncl) LatexFrWordpress clPathFileXML

NB. LaTeX file & directory defaults
(TEXTROOTFILE;TEXPREAMBLE;TEXFRWPDIR;TEXINCLUSIONS) LatexFrWordpress y
:
'texroot texpreamble texdir texincl'=. x

NB. must have a root tex file
if. -.fexist texdir,texroot do. 0;'missing or invalid LaTeX root file' return. end.

```

NB. read wordpress xml

```
if. fexist y do. xml=. read y else. 0; 'missing or invalid XML export file' return. end.
```

NB. new published posts

```
if. #newposts=. (texdir; TEXEXT) prunePtable ptableFrwpxml xml do.
```

```
    newposts=. sortposts newposts
    titles=. texdir tfwTitles 1 {"1 newposts
    'title post mismatch' assert (#titles) = #newposts
```

```
    predir=. texpreamble;texdir
    for_post. newposts do.
        smoutput ;post_index{titles
        pdat=. (post_index{titles), (2 3 4{post), <cdatatext;5{post
        tex=. predir texFrhtml pdat
```

NB. append common figure code to each post

```
    tex=. tex, CRLF, LATEXFIGURETEMPLATES
```

```
    tex write texdir, (;0{post), TEXEXT
end.
```

NB. adjust root tex file to reference new posts

NB. no additions if files already referenced

```
tex=. read root=. texdir, texroot
mask=. -. (0 {"1 newposts) 1&e.@E.&> <tex
```

```

newposts=. mask#newposts
titles=.  mask#titles
tex=.  tex inputposts newposts
tex write root

NB. result titles of new posts
1;titles
else.
1;'no new posts'
end.
)

MainMarkdown=: 3 : 0

NB.*MainMarkdown v-- assembles *.markdown files in EPUB directory in a master
NB. file.
NB.
NB. monad:  bl =. MainMarkdown clPathFile
NB.
NB.  MainMarkdown 'c:/pd/blog/wordpress/analyzethedatanotthedriviel.wordpress.xml '
NB.
NB. dyad:  bl =. (clMdownfile;clDirectory;clAmble) MainMarkdown clPathFile

(MARKDOWNFILE;EPUBFRWPDIR;EPUBAMBLE;MDSECTIONPFX) MainMarkdown y
:
'mdownfile epubdir epubamble mdsecpfx'=. x

NB. read wordpress xml - valid posts

```



```
if. fexist y do. xml=. read y else. 0;'missing or invalid XML export file' return. end.
```

```
pfiles=. 0 {"1 (1!:0) epubdir,'*',MARKDOWNNEXT
```

NB. keep only post markdown files

```
ptable=. ptableFrwpxml xml
posts=. (0{"1 ptable) ,&.> <MARKDOWNNEXT
pfiles=. pfiles -. pfiles -. posts
```

NB. sort files by publish date

```
pfiles=. ptable sortonpublishdate pfiles
files=. (<epubdir) ,&.> pfiles
```

NB. NOTE: sometimes posts are written long before they are published

NB. sort files by trailing post id

NB. files=. sortonid files

NB. mash posts together - affix date

```
epubamble=. (allwhitetrim epubamble),LF,('% ',timestamp '),2#LF
posts=. ; (<mdsecpfx) ,&.> (allwhitetrim&.> read&.> files) ,&.> <2#LF
posts=. utf8 toHOST epubamble,(2#LF),posts
posts write file=. epubdir,mdownfile
1;((":#files),' post(s)');file
)
```

```
MarkdownFrLatex=: 3 : 0
```

*NB.*MarkdownFrLatex v-- converts edited LaTeX post files to image*

```

NB. free markdown.
NB.
NB. This verb converts edited *.tex files into *.markdown which
NB. are then used to build an EPUB. The markdown requires a small
NB. bit of editing, mostly to cleanup the odd LaTeX fragment that
NB. Pandoc does not convert. This is nowhere near the chore that
NB. editing the WordPress CDATA HTML to *.tex is and has the nice
NB. feature of preserving all the corrections made to the *.tex
NB. files.
NB.
NB. monad: bl =. MarkdownFrLatex clPathFileXML
NB.
NB.   MarkdownFrLatex 'c:/pd/blog/wordpress/analyzethedatanotthedrive1.wordpress.xml'
NB.
NB. dyad: bl =. blcl MarkdownFrLatex clPathFileXML

(MARKDOWNFILE;EPUBFRWPDIR;TEXFRWPDIR) MarkdownFrLatex y
:
'markfile epubdir texdir'=. x

NB. read wordpress xml - defines post order
if. fexist y do. xml=. read y else. 0;'missing or invalid XML export file' return. end.

NB. require 'regex' !(*)=. rxutf8
NB. turn off utf8 for regex - required for J 9.04
rxp=. rxutf8 0

```

NB. posts without markdown versions

```
if. #newposts=. (epubdir;MARKDOWNEXT) prunePtable ptableFrwpxml xml do.
```

```
  cvtitles=.'
```

```
  newposts=. sortposts newposts
```

```
  outinext=. MARKDOWNEXT;TEXEXT
```

```
  for_post. newposts do.
```

```
    'post title'=. 0 1{post
```

```
    if. fexist tex=. texdir,post,TEXEXT do.
```

```
      tex=. rmLatexGraphics read tex
```

```
      texfile=. (t slash jpathsep epubdir),TEMPTEXFILE
```

```
      (utf8 tex) write texfile
```

```
      mdown=. outinext pandoc texfile
```

NB. if pandoc cannot convert to markdown it returns nothing

```
      if. 0=#allwhitetrim mdown do.
```

```
        smoutput 'no markdown -> ',title
```

NB. save the original file - tweaking is necessary

```
        (utf8 tex) write epubdir,post,BADDOWNEXT
```

```
      else.
```

```
        mdown=. post mdfootnotes mdown
```

```
        mdown write epubdir,post,MARKDOWNEXT
```

```
      end.
```

```
      outinext clear temps texfile
```

```
      cvtitle=. cvtitles,<title
```

```
    else.
```

```
      smoutput 'skipping missing *.tex file -> ',post,TEXEXT
```

```
    end.
```

```

end.
1;cvtitles

else.
1;'no new posts'
end.
)

SetTeXfrWpxmlPaths=: 3 : 0

NB.*SetTeXfrWpxmlPaths v-- sets OS dependent paths.
NB.
NB. Customize the path and file settings in this verb
NB. to match your locations.
NB.
NB. monad: SetTeXfrWpxmlPaths uuIgnore

NB. system nouns !(*)=. IFWIN IFUNIX
if. IFWIN do.
    TEXFRWPDIR=: 'c:/pd/blog/wp2latex/'
    EPUBFRWPDIR=: 'c:/pd/blog/wp2epub/'
elseif. IFUNIX do.
    TEXFRWPDIR=: '/home/john/pd/blog/wp2latex/'
    EPUBFRWPDIR=: '/home/john/pd/blog/wp2epub/'
elseif.do.
    'not on supported OS' assert 0
end.

```

NB. TeX root, preamble, inclusions subdirectory name

```
TEXROOTFILE=: 'bm.tex'
TEXPREAMBLE=: 'bmamble.tex'
TEXINCLUSIONS=: 'inclusions'
```

NB. EPUB eBook file

```
EPUBFILE=: 'bm.epub'
```

NB. standardize document directory paths

```
TEXFRWPDIR=: tlash jpathsep TEXFRWPDIR
EPUBFRWPDIR=: tlash jpathsep EPUBFRWPDIR
)
```

NB. retains string (y) after last occurrence of (x)

```
afterlaststr=: ] }.~ #@[ + 1&(i.~)@([ E. ])
```

NB. retains string after first occurrence of (x)

```
afterstr=: ] }.~ #@[ + 1&(i.~)@([ E. ])
```

NB. trims all leading and trailing white space

```
allwhitetrims=: ] #~ [: -. [: (*./\ . +. */\ ) ] e. (9 10 13 32{a.})"
```

NB. signal with optional message

```
assert=: 0 0"_ $ 13!:8^:(0: e. ])^` (12"_))
```

NB. extracts text of xml attribute

```
attrvalue=: '""'_ beforestr ([ , '=''_)_ afterstr '>'_'_ beforestr ]
```

NB. retains string (y) before last occurrence of (x)

```
beforelaststr=: ] {~ 1&(i:~)@([ E. ])
```

NB. retains string before first occurrence of (x)

```
beforestr=: ] {~ 1&(i.~)@([ E. ])
```

```
blogimgs=: 3 : 0
```

*NB.*blogimgs v-- extracts all images referenced in post CDATA.*

NB.

NB. monad: btcl =. blogimgs btclPosts

NB.

NB. blogimgs posts NB. see (ptableFrwpxml)

```
if. 0=#y do. 0 3$'' return. end.
```

NB. cut CDATA on <img's

```
txt=. ;(cdatatext&.> 5 {"1 y) ,&.> LF
```

```
cimg=. ('>'&beforestr) &.> ( <'<img ' E. txt) <;.1 txt
```

NB. form table of titles and src urls

```
cimg=. ('title'&attrvalue ; 'src'&attrvalue) &> cimg
```

NB. prefix file name

```
cimg ,.~ ('?'&beforestr)@('/'&afterlaststr) &.> {"1 cimg
)
```

NB. boxes open nouns

boxopen=: <^(L. = 0:)

NB. extract character list from HTML CDATA

cdatatext=: [: ']]>'&beforelaststr '<![CDATA['&afterstr

changestr=: 4 : 0

*NB.*changestr v-- replaces substrings - see long documentation.*

NB.

NB. dyad: clReps changestr cl

NB.

NB. NB. first character delimits replacements

NB. '/change/becomes/me/ehh' changestr 'blah blah ...'

```

pairs=. 2 {."(1) _2 [\ <; _1 x      NB. change table
cnt=_1 [ lim=. # pairs
while. lim > cnt=.>:cnt do.        NB. process each change pair
  't c'=. cnt { pairs              NB. /target/change
  if. +./b=. t E. y do.            NB. next if no target
    r=. I. b                       NB. target starts
    'l q'=. #&> cnt { pairs         NB. lengths
    p=. r + 0,+/\(<:# r)$ d=. q - 1 NB. change starts
    s=. * d                        NB. reduce < and > to =
    if. s = _1 do.
      b=. 1 #~ # b
      b=. ((l * # r)$ 1 0 #~ q,l-q) (,r +/ i. l)} b

```

```

    y=. b # y
    if. q = 0 do. continue. end.  NB. next for deletions
elseif. s = 1 do.
    y=. y #~ >: d r} b           NB. first target char replicated
end.
    y=(c $~ q *# r) (,p +/i. q)} y  NB. insert replacements
end.
end. y                          NB. altered string
)

```

```
charsub=: 4 : 0
```

*NB.*charsub v-- single character pair replacements.*

NB.

NB. dyad: clPairs charsub cu

NB.

NB. '\$_\$ ' charsub '\$123 -456 -789'

```
'f t'=. ((#x)$0 1)<@,&a./.x
```

```
t {~ f i. y
```

```
)
```

```
cleartemps=: 3 : 0
```

*NB.*cleartemps v-- erase temporary HTML/TEX & TEX/MARKDOWN files*

NB.

NB. monad: cleartemps clPathFile


```

NB. dyad: (clOutExt;clInExt) cleartemps clPathfile

(TEXEXT;HTMLEXT) cleartemps y
:
'outext inext'=. x
(inext,' extension required') assert 1 e. inext E. y
ferase y;('.'&beforelaststr y),outext
)

countYearposts=: 3 : 0

NB.*countYearposts v-- adds post counts to table of content lines.
NB.
NB. NOTE: this verb depends on the layout of (bm.tex).
NB.
NB. monad: clTex =. countYearposts clFileTeX
NB.
NB. NB. root latex file
NB. tex=. 'c:\pd\blog\wp2latex\bm.tex'
NB. (toHOST countYearposts tex) write tex

NB. read and cut latex
ctex=. tex <;.1~ 1 (0)}'\addcontentsline{toc}{section}' E. tex=. read y

NB. post counts
pcnts=. +/@('input{'&E.)&.> }.ctex

NB. add content lines

```

```
atocs=. ('---'&beforelaststr)@('}'&beforelaststr)@(\&beforestr)&.> }.ctex
```

NB. append counts

```
atocs=. atocs ,&.> (<' --- ' ) ,&.> (":&.> pcnts) ,&.> <' posts}' ,CRLF
```

NB. clip old content lines and append new

```
; (0{ctex) , atocs ,&.> \&afterstr&.> }.ctex
)
```

NB. character table to newline delimited list

```
ctl=: }.@(@1&(",1)@(-.@(*./\."1@(&' ' @])))) # ,@((10{a.)&(",1)@]))
```

```
cutincludegraphicsidx=: 3 : 0
```

*NB.*cutincludegraphicsidx v-- cut list into \includegraphics*

NB. LaTeX and other

NB.

NB. monad: (ilIdx ;< blcl) =. cutincludegraphicsidx clTex

```
(' \includegraphics{' ; '}' ; 0) cutpctidx y
)
```

```
cutlatexidx=: 3 : 0
```

*NB.*cutlatexidx v-- cut list into WordPress LaTeX and other.*

NB.

NB. monad: (ilIdx ;< blcl) =. cutlatexidx clHtml

```

NB.
NB.  cutlatexidx ' ... yada yada $latex frac{a}{b}$ and so on ... '

('$latex';'$';1) cutpxtidx y
)

cutnestidx=: 4 : 0

NB.*cutnestidx v-- cut list into nested runs and other.
NB.
NB. Nested runs are delimited by begin and end tags. This verb is
NB. oriented toward XML parsing where typical begin end tags are
NB. <ul> </ul> and tags with attributes like: <hoo boy="2">
NB. </hoo>
NB.
NB. This verb can process numeric lists but care must be taken to
NB. insure the pad item (1{.0$y) does not match begin and end
NB. values.
NB.
NB. dyad: (ilIdx ;< blcl) =. (clStart;clEnd) cutnestidx cl
NB.       (ilIdx ;< blnl) =. (nlStart;nlEnd) cutnestidx nl
NB.
NB.  xml=. 'yada <ol><li>one</li><ol><li>sub one</li></ol></ol> boo'
NB.  ('<ol';'</ol>') cutnestidx xml
NB.
NB.  88 99 cutnestidx (i.5),88,(10?10),99 88 5 5 5 5 5 99

if. #y do.

```

```

's e'=. ,&.> x          NB. start end lists
ut=. 1{.0$y             NB. padding
assert. -.s -: e        NB. they must differ
assert. -(s -:ut) +. e -:ut
sp=. s E. ut=.y,ut      NB. start mask

NB. quit if no delimiters
if. -.1 e. sp do. (i.0);<<y return. end.

ep=. e E. ut           NB. end mask
assert. (+/sp) = +/ep   NB. basic balance
dp=. sp + - ep         NB. start end marks
assert. 0 *./ . <: +/\ dp NB. nested balance
ep=. I. _1=dp [ sp=. I. 1=dp NB. start end indexes
ut=. +/\dp -. 0        NB. scanned marks
dp=. /:~ sp,ep         NB. all indexes
sp=. (firstones 1<:ut)#dp NB. starts of nested
ep=. (#e)+(0=ut)#dp    NB. starts of other
dp=. /:~ ~.0,sp,ep     NB. cut starts
ut=. }: 1 dp} (>:#y)#0 NB. cut mask
(dp i. sp);<ut <;.1 y  NB. nest indexes cut list
else.
  (i.0);<<y           NB. empty arg result
end.
)

cutpxtidx=: 4 : 0

```

```

NB.*cutptidx v-- cut list into prefix with character terminator
NB. and other.
NB.
NB. monad: (ilIdx ;< blcl) =. (clPfx;caEend;iaPos) cutptidx clHtml
NB.
NB.    ('$latex';'$';1) cutptidx ' ... yada yada $latex frac{a}{b}$ and so on ... '
NB.    ('\includegraphics{'';'}';0) cutptidx ' boo hooo \includegraphics{pictures.png} et cetera'

's e p'=. x NB. start end position
assert. (1=#e) *. 1=#p
if. 1 e. b=. s E. ,y do.
    sp=. I. b
    op=. (0 e. sp) }. 0,sp + >:p&{@I.@(e&=)&> b <;.1 y
    op=. /:~ sp,op -. #y
    (op i. sp) ;< (1 op} b) <;.1 y
else.
    (i.0);<<y
end.
)

cutstridx=: 4 : 0

NB.*cutstridx v-- cut list into (x) and other.
NB.
NB. dyad: (ilIdx ;< blcl) =. clStr cutstridx cl
NB.
NB.    'CHOP' cutstridx 'CHOP CHOP me up CHOP ehh'

```

```

if. 1 e. b=. x E. ,y do.
  sp=. I. b
  op=. (0 e. sp) }. 0,sp + #x
  op=. /:~ sp,op -. #y
  (op i. sp) ;< (1 op} b) <;.1 y
else.
  (i.0);<<y
end.
)

```

NB. boxes UTF8 names

```
fboxname=: ([: < 8 u: >) ::]
```

NB. erase files - cl / blcl of path file names

```
ferase=: 1!:55 ::(_1:)@(fboxname&>)@boxopen
```

NB. 1 if file exists 0 otherwise

```
fexist=: 1:@(1!:4) ::0:@(fboxname&>)@boxopen
```

```
filenamesFrtd=: 3 : 0
```

*NB.*filenamesFrtd v-- form file names from titles and ids.*

NB.

NB. monad: blclFilename =. filenamesFrtd btclTitleId

NB.

NB. wpxml=. read 'c:/pd/blog/wordpress/analyzethedatanotthedrivvel.wordpress.xml'

NB. posts=. ptableFrwpxml wpxml

NB. `filenamesFrtid 0 1 {"1 posts`

NB. **NOTE:** there's been a change in WordPress (22mar29) XML that
 NB. encloses blog post titles in `<![CDATA['s cdatatext` extracts
 NB. the titles - will fail if there are no `<![CDATA['s`

NB. **NOTE:** this algorithm for forming file names has proven very
 NB. stable over years of use. The generated names are readable,
 NB. portable and unique. Sometimes you get things right.

NB. remove all but upper and lowercase alpha and lower case remainder
`fn=. (cdatatext&.> 0 {"1 y) tolower@-.&.> <a.-.((65+i.26),97+i.26){a.`

NB. take at most `FILETITLELEN` chars and append unique post id
`((FILETITLELEN <. #&> fn) {.&.> fn) ,&.> 1 {"1 y`
`)`

NB. 0's all but first 1 in runs of 1's - like (firstone) but differs for nulls
`firstones=: > (0: , }:)`

NB. size of file in bytes
`fsize=: 1!:4 ::(_1:)@(fboxname&>)@boxopen`

`getNewgraphics=: 3 : 0`

NB. `*getNewgraphics` v-- downloads graphics files referenced in
 NB. LaTeX.

NB.

NB. monad: ((<blclDown),<blclMissing) =. getNewgraphics clTex

```
none=. '';
```

```
if. y do.
```

NB. extract any graphics urls

```
graphic=. '\includegraphics{'
```

```
mask=. graphic E. y
```

```
if. -.1 e. mask do. none return. end.
```

```
urls=. (#graphic) }.&.> mask <.;1 y
```

```
urls=. ('?'&beforestr)@('}'&beforestr)&.> urls
```

NB. download images to inclusions/ directory

```
ifiles=. (<TEXFRWPDIR,tlslash TEXINCLUSIONS) ,&.> '/'&afterlaststr&.> urls
```

```
wcmds=. WGETCMD ,"1 > ifiles ,&.> ' ' ,&.> urls
```

NB. require 'task' !()=. shell*

```
skipcnt=. 0 [ dfiles=. mfiles=. ''
```

```
for_cmd. wcmds do.
```

```
file=. ;cmd_index{ifiles
```

NB. skip files that exist in inclusions/

```
if. fexist file do. skipcnt=.:skipcnt continue. end.
```

```
shell cmd [ smoutput 'downloading: ',file
```

```
if. 0<fsize file do. dfiles=. dfiles,<file
```



```

else.
  ferase file  NB. clears any 0 byte files
  mfiles=. mfiles,<file [ smoutput 'warning - did not download: ',file
end.
end.
smoutput (":#dfiles),' downloaded; ',(":#mfiles),' not downloaded; ',(":skipcnt),' skipped'
(<dfiles),<mfiles  NB. downloaded & not downloaded

else.
  none
end.
)

htmlParagraphs=: 3 : 0

NB.*htmlParagraphs v-- mark missing html paragraphs.
NB.
NB. WordPress HTML frequently omits paragraph tags <p> </p>.
NB. Missing paragraph tags cause Pandoc to run paragraphs
NB. together in the generated LaTeX. This verb inserts leading
NB. <p> tags in LF delimited runs. The vast majority of such runs
NB. are paragraphs.
NB.
NB. monad: cl =. htmlParagraphs clHtml

if. 1 e. '<p>' E. y do. y
else.
  NB. cut paragraphs

```

```

cs=. <;._2 tlf y -. CR
NB. tag or newlines
tnl=. ((2#LF)"_)\`('<p>'&,)@.(0 < #)
; tnl&.> cs
end.
)

inputposts=: 4 : 0

NB.*inputposts v-- appends new %\input{file.tex} commands to root
NB. tex.
NB.
NB. dyad: clTex =. clTex inputposts btclPosts

if. #y do.
  bp=. '%</blogposts>'
  new=. ;(<'%\input{' ,&.> (0 {"1 y) ,&.> (<TEXEXT,'} %') ,&.> (3 {"1 y) ,&.> LF
  head=. bp&beforestr x
  tail=. bp&afterstr x
  head,LF,new,bp,tail
else.
  x
end.
)

NB. standarizes J path delimiter to unix/linux forward slash
jpathsep=: '/'&(('\ ' I.@:= ])) )

```

NB. extracts the drive from qualified file names

```
justdrv=: [: }: ] #~ [: +./\ . ':'&=
```

NB. extracts the extension from qualified file names

```
justext=: '"_`([ #~ [: -. [: +./\ . '.'&=)@.('.'&e.)
```

NB. file name from fully qualified file names

```
justfile=: ([ #~ [: -. [: +./\ . '.'&=)@([ #~ [: -. [: +./\ . e.&':\')
```

NB. extracts only the path from qualified file names

```
justpath=: [: }: ] #~ ([: -. [: +./\ . ':'&=) *. [: +./\ . '\ '&=
```

```
lstFrsrcb=: 4 : 0
```

*NB.*lstFrsrcb v-- lstlisting from source block.*

NB.

NB. monad: cl =. clPid lstFrsrcb clSrc

```
'start end'=. BESOURCEDELS
```

NB. first line is block header with wp addon parameters

```
head=. LF&beforestr y
```

```
body=. LF&afterstr end&beforelaststr y
```

NB. revert special CDATA HTML characters

```
body=. HTMLREPS changestr body
```

```

NB. insert label uses post id and scr block cnt to be unique
lstlisting=. ('#~~~LSTLABEL~~~#scr',x) changestr LSTLISTINGHDR

NB. leave original header as latex comment
LF,'% ',head,LF,lstlisting,LF,body,LSTLISTINGEND
)

mdfootnotes=: 4 : 0

NB.*mdfootnotes v-- prefix numbered pandoc markdown footnotes
NB. with post number.
NB.
NB. When building EPUB documents from many markdown texts it's
NB. important that all footnote labels are unique. The standard
NB. practice of [^1], [^2], ... leads to clashes. This verb
NB. prefixes all numbered pandoc footnotes with the post number.
NB. The post number is a unique blog specific integer assigned by
NB. WordPress.com. A superior unique key like a secure hash is
NB. overkill here but may be necessary if you are merging posts
NB. across many blogs.
NB.
NB. dyad: cl =. clPostId mdfootnotes clMd
NB.
NB. md=. read 'c:/pd/blog/wp2epub/oscarsnowasmeaning6975.markdown'
NB. 'oscarsnowasmeaning6975' mdfootnotes md

NB. require 'regex' !(*)=. rxall rxmatches rxmerge rxutf8

```

```

NB. turn off utf8 for regex - required for J 9.04
rxp=. rxutf8 0

fp=. '\[^\[0-9]\]' NB. pandoc footnotes

if. #fn=. >fp rxall y do.
  NB. post number
  pn=. 'x' ,~ x #~ x e. '0123456789'
  NB. relabeled footnotes
  nfn=. <"1 ' ' -."1~ ((0 1 {"1 fn) ,"1 pn) ,"1 > 2 }."1 fn
  nfn (fp rxmatches y) rxmerge y
else.
  y NB. no footnotes
end.
)

pandoc=: 3 : 0

NB.*pandoc v-- shells pandoc to convert HTML->LaTeX & LaTeX->Markdown.
NB.
NB. monad: cl =. pandoc clFile
NB.
NB.   tex=. pandoc 'c:/temp/cdata.html'
NB.
NB. dyad: cl =. (clOutExt;clInExt) pandoc clFile
NB.
NB.   markdown=. (MARKDOWNEXT;TEXEXT) pandoc 'c:/temp/post.tex'

```

```

(TEXEXT;HTMLEXT) pandoc y
:
'outext inext'=. x
y=. winpathsep y
(inext,' extension required') assert (inext-'.') -: justext y
file=. justfile y
drv=. ]`([@,&':'')@.(0 < #) justdrv y
dir=. tlash drv,justpath y
NB. output written to same directory as source
in=. jpathsep y [ out=. jpathsep dir,file,outext
(inext,' file must exist') assert fexist in
ferase out
NB. require 'task' !(*)=. shell
shell PANDOC CMD,' ',out,' ',in
(outext,' conversion failed') assert fexist out
read out
)

postTitleDate=: 3 : 0

NB.*postTitleDate v-- post LaTeX section title code.
NB.
NB. monad: cl =. postTitleDate (clTitle;clDate;clUrl)

'ptitle pdate purl'=. y
reps=. '|~~~TITLETEXT~~~|',allwhitetrims pttitle
reps=. reps,'|~~~POSTURL~~~|',allwhitetrims purl
pttitle=. reps changestr TEXSECTIONTITLE

```

```
pdate=. 'Posted: ',timestamp ".'- : ' charsub pdate
ptitle,(2#LF),'\noindent\emph{' ,pdate,'}',LF,'\vspace{6pt}',2#LF
)
```

```
postfiles=: 3 : 0
```

*NB.*postfiles v-- list of post LaTeX files.*

NB.

NB. monad: blclTexfiles =. postfiles uuIgnore

NB. system nouns !()=. IFWIN IFUNIX*

```
if. IFWIN do. wpxml=. read 'c:/pd/blog/wordpress/analyzethedatanotthedrive1.wordpress.xml'
```

```
elseif. IFUNIX do. wpxml=. read '/home/john/pd/blog/wordpress/analyzethedatanotthedrive1.wordpress.xml'
```

```
elseif.do.
```

```
  'not on supported os' assert 0
```

```
end.
```

```
posts=. ptableFrwpxml wpxml
```

```
(<TEXFRWPDIR) ,&.> (0 {"1 posts) ,&.> <TEXEXT
```

```
)
```

```
postid=: 3 : 0
```

*NB.*postid v-- test verb that forms (texFrhtml) (y) arguments.*

NB.

NB. monad: postid iaPid

NB. dyad: (clStatus;clType) postid iaPid

NB.

```

NB.    (;;; 'draft post') postid '' NB. drafts

(;;; 'publish post') postid y
:
NB.  !(*)=. IFWIN IFUNIX posts list nc
if.      IFWIN do. wpxml=. read 'c:/pd/blog/wordpress/analyzethedatanotthedriv1.wordpress.xml'
elseif. IFUNIX do. wpxml=. read '/home/john/pd/blog/wordpress/analyzethedatanotthedriv1.wordpress.xml'
elseif.do.
  'not on supported OS' assert 0
end.
posts=: x ptableFrwpxml wpxml
pids=. 2 {"1 posts
if. 0=#y do. list pids return. end.
y=. ":y
if. (<y-. ' ') e. pids do.
  pt=. posts {~ pids i. <y NB. post id
  (tfwTitles 1{pt),(2 3 4{pt),<cdatatext;5{pt
else.
  smoutput 'no post with pid: ',y
end.
)

posttex=: 3 : 0

NB.*posttex v-- LaTeX code for single post/draft.
NB.
NB. monad: clTex =. posttex iaPid
NB. dyad:  clTex=. (clStatus;clType) posttex iaPid

```



```

NB.
NB.   tex=. (;:'draft post') posttex 638

(;;:'publish post') posttex y
:
texFrhtml x postid y
)

prunePtable=: 3 : 0

NB.*prunePtable v-- removes post table entries that have
NB. corresponding files.
NB.
NB. monad: btcl =. prunePtable btclPosts
NB.
NB.   prunePtable posts NB. see (ptableFrwpxml)
NB.
NB. dyad: btcl =. (clDirectory;clExt) prunePtable btclPosts

(TEXFRWPDIR;TEXEXT) prunePtable y
:
'path ext'=. x
y #~ -.fexist (<path) ,&.> (0 {"1 y) ,&.> <ext
)

ptableFrwpxml=: 3 : 0

```

```

NB.*ptableFrwpxml v-- type status table from wordpress xml.
NB.
NB. monad: btcl =. ptableFrwpxml clXml
NB.
NB. wpxml=. read 'c:/pd/blog/wordpress/analyzethedatanotthedrivvel.wordpress.xml '
NB. posts=. ptableFrwpxml wpxml
NB.
NB. dyad: btcl =. (clStatus;clType) ptableFrwpxml clXml
NB.
NB. drafts=. (;:'draft post') ptableFrwpxml wpxml

(;;:'publish post') ptableFrwpxml y
:
NB. cut items
cxml=. ('<item>' E. y) <;.1 y

NB. item attribute extractors
istatus=. [: '</wp:status>'&beforestr&.> '<wp:status>'&afterstr&.>
itype=.    [: '</wp:post_type>'&beforestr&.> '<wp:post_type>'&afterstr&.>
ipostid=.  [: '</wp:post_id>'&beforestr&.> '<wp:post_id>'&afterstr&.>
ititle=.   [: '</title>'&beforestr&.> '<title>'&afterstr&.>
ilink=.    [: '</link>'&beforestr&.> '<link>'&afterstr&.>
idate=.    [: '</wp:post_date_gmt>'&beforestr&.> '<wp:post_date_gmt>'&afterstr&.>
icontent=. [: '</content:encoded>'&beforestr&.> '<content:encoded>'&afterstr&.>

NB. all status + types
ppxml=. cxml #~ x -: "1 (istatus ,. itype) cxml

```

```

NB. return filename, title, id, date, link, content
ppxml=. (ititle ,. ipostid ,. idate ,. ilink ,. iconent) ppxml
(filename$Frtid 0 1 {"1 ppxml) ,. ppxml
)

NB. reads a file as a list of bytes
read=: 1!:1&([`<@.(32&>@{3!:0)))

rmLatexGraphics=: 3 : 0

NB.*rmLatexGraphics v-- remove/blank out LaTeX graphics.
NB.
NB. This verb removes LaTeX comments and graphics environments
NB. from *.tex. This is done to produce lightweight EPUB and MOBI
NB. eBook versions that perform well on Kindles, iPhones, iPads
NB. and so forth.
NB.
NB. monad: cl =. rmLatexGraphics clTex
NB.
NB. tex=. read 'c:/pd/blog/wp2latex/cowboysandaliansando1698.tex'
NB. rmLatexGraphics tex

rp=. <' '
tex=. <:2 tlf y -. CR
tex=. ;('%' ~: {.@allwhitetrims) tex) # tex
'ix cs'=. ('\begin{floatingfigure}';'\end{floatingfigure}') cutnestidx tex

```

```

tex=. ;rp ix} cs
'ix cs'=. ('\begin{SCfigure}';'\end{SCfigure}') cutnestidx tex
tex=. ;rp ix} cs
'ix cs'=. ('\begin{figure}';'\end{figure}') cutnestidx tex
if. envtex=. ;ix{cs
    b0=. -.1 e. '\begin{minipage}' E. envtex
    b1=. 1 e. '\includegraphics' E. envtex
    b1 *. b0 do. tex=. ;rp ix} cs
end.
NB. clear any remaining caption setup pandoc passes them to .markdown
'ix cs'=. ('\captionsetup';'}';0) cutpxtidx tex
tex=. ;rp ix} cs
)

sha1=: 3 : 0

NB.*sha1 v-- sha1 hexadecimal hash.
NB.
NB. monad: clHash =. sha1 cl
NB.
NB. sha1 'this is a fine mess'
NB.
NB. sha1 10000 $ 'a bigger mess '

NB. code before J 8.06
NB. sslsha1 (y);(# y);hash=. 20#' '
NB. hash

```

```

NB. use J sha foreign available after J 8.06
1&(128!:6) y
)

sha1dir=: 3 : 0

NB.*sha1dir v-- compute sha1 hashes for files matching pattern in directory.
NB.
NB. monad: btcl =. sha1dir clPathRoot
NB.
NB.    sha1dir 'c:/pd/blog/wp2latex/*.tex'

jfe=. ] #~ [: -. [: +./\ . '/'&= NB. just file extension

NB. code used before J 8.06
NB. hexadecimal list from integers
NB. hdl=. [: , [: hfd2 a. i. ]
NB. standard profile !(*)=. dir
NB. (jfe&.> files) ,.~ hdl @ sha1 @ read&.> files=. 1 dir jpathsep y

(jfe&.> files) ,.~ sha1 @ read&.> files=. 1 dir jpathsep y
)

NB. show and then pass noun
showpass=: ] [ 1!:2&2

NB. session manager output
smoutput=: 0 0 $ 1!:2&2

```

```
sortonid=: 3 : 0
```

```
NB.*sortonid v-- sort files by trailing post id - monotonically increasing
NB.
```

```
NB. monad: blcl=. sortonid blclFiles
```

```
(/: "&> ('/'&afterlaststr&.> y) -.&.> <a. -. '0123456789') { y
)
```

```
sortonpublishdate=: 4 : 0
```

```
NB.*sortonpublishdate v-- sort markdown post files by publish date.
NB.
```

```
NB. dyad: blcl =. btclPosts sortonpublishdate blclFiles
```

```
NB. posts and dates
```

```
postdate=. 0 3 {"1 x
```

```
NB. selected post files without extension
```

```
pfiles =. '.'&beforelaststr&.> y
```

```
mask=. pfiles e. 0 {"1 postdate
```

```
postdate=. mask # postdate
```

```
files=. 0 {"1 (/: 1 {"1 postdate){postdate
```

```
files ,&.> <MARKDOWNEXT
```

```
)
```

```
sortposts=: 3 : 0
```

```

NB.*sortposts v-- sort posts chronologically.
NB.
NB. monad:  bt =. sortposts blclPosts

(/: ". ' - : ' charsub >3 {"1 y){y
)

texFrhtml=: 3 : 0

NB.*texFrhtml v-- convert WordPress HTML fragments to LaTeX
NB. fragments
NB.
NB. monad:  clTex =. texFrhtml (clTitle;clDate;clPid;clHtml)
NB.
NB.  wpxml=. read 'c:/pd/blog/wordpress/analyzethedatanotthedrive1.wordpress.xml'
NB.  posts=. ptableFrwpxml wpxml
NB.  pt=.    posts {~ (2 {"1 posts) i. <'3303' NB. post id
NB.  tpdup=. (tfwTitles 1{pt),(2 3 4{pt),<cdatatext;5{pt
NB.  tex=.   texFrhtml tpdup NB. title, pid, date, url, post text
NB.
NB. dyad:    clTex =. (clPreamble;clDir) texFrhtml (clTitle;clDate;clPid;clUrl;clHtml)

(TEXPREAMBLE;TEXFRWPDIR) texFrhtml y
:
'texpreamble texdir'=. x

NB. title, id, date, url, html

```

```
'ptitle pid pdate url htm'=. y
if. 0=#htm do. '' return. end.
```

```
cm=. 1&e.@E.
sblk=. utf8 ,SOURCEBLOCKMARK [ lfrg=. utf8 ,LATEXFRAGMARK [ pblk=. utf8 ,SOURCEPREMARK
NB. NIMP test is not exhaustive
'markers must not be substrings' assert -. +./(sblk cm lfrg),(lfrg cm sblk),(sblk cm pblk),lfrg cm pblk
```

NB. leave commented warning about HTML tables

```
tabwarn=. ('</table>' 1&e.@E. htm)#'%%% HTML table in source - edits required'
```

NB. hide Pandoc highlighted source code <pre ... </pre> blocks

```
'ixpre cspre'=. BESOURCEPREDELS cutnestidx htm
if. #ixpre do.
  'source pre marker in .html' assert -. 1 e. pblk E. htm
  htm=. ; (<pblk) ixpre} cspre
end.
```

NB. hide WordPress [sourcecode ...] blocks

```
'ixsrc cssrc'=. BESOURCEDELS cutnestidx htm
if. #ixsrc do.
  'source block marker in .html' assert -. 1 e. sblk E. htm
  htm=. ; (<sblk) ixsrc} cssrc
end.
```

NB. hide WordPress \$latex ... \$

```
'ixltx csmtx'=. cutlatexidx htm
```



```
if. #ixltx do.  
  'latex fragment marker in .html' assert -. 1 e. lfrg E. htm  
  htm=. ; (<lfrg) ixltx} csmtx  
end.  
  
NB. insert missing paragraph tags - will wreck <pre> blocks  
htm=. htmlParagraphs htm  
  
NB. restore hidden <pre> blocks - not LF delimited paragraphs  
if. #ixpre do.  
  'ixltxpre csmtxpre'=. pblk cutstridx htm  
  '<pre> block source fragment count mismatch' assert (#ixltxpre) = #ixpre  
  htm=. ;(ixpre{cspre) ixltxpre} csmtxpre  
end.  
  
NB. convert html to latex  
htmfile=. (t slash jpathsep texdir),TFWTEMPHTML  
(utf8 htm) write htmfile  
tex=. pandoc htmfile  
cleartemps htmfile  
  
NB. download any new referenced graphics  
gdm=. getNewgraphics tex  
  
NB. insert any latex $latex ... $ math fragments  
if. #ixltx do.  
  'ixltxrp csmtxrp'=. lfrg cutstridx tex
```

```

'latex math fragment count mismatch' assert (#ixltx) = #ixltxrp
ltx=. ixltx{csltx
NB. reset special HTML characters in LaTeX
ltx=. HTMLREPS&changestr&.> ltx
NB. drop leading $latex and replace with $
ltx=. '$' ,&.> (#'$latex ') }.&.> ltx
tex=. ;ltx ixltxrp} csltxrp
end.

NB. insert \lstlisting versions of source code blocks
if. #ixsrc do.
  'ixsrcrp cssrcrp'=. sblk cutstridx tex
  'source code block count mismatch' assert (#ixsrc) = #ixsrcrp
  pidlbls=. (<pid,'X') ,&.> " :&.> <"0 i.#ixsrc
  src=. pidlbls lstFrsrcb&.> ixsrc{cssrc
  tex=. ;src ixsrcrp} cssrcrp
end.

NB. reduce \includegraphics urls to downloaded image file names
'ixgx csgx'=. cutincludegraphicsidx tex
if. #ixgx do.
  gtxt=. '?'&beforestr&.> ('}'&beforestr)@('/'&afterlaststr)&.> ixgx{csgx
  if. 1 e. gmsk=. 0 < #&> gtxt do.
    gfiles=. gmsk#gtxt
    gtxt=. (<'\\includegraphics{' ) ,&.> gfiles ,&.> '}'
    ixgx=. gmsk#ixgx
    pidlbls=. (<pid,'X') ,&.> " :&.> <"0 i.#ixgx

```

```

fig=. (((<'|~~~IMGRAPHICFILE~~~|') ,&.> gfiles) changestr&.> <TEXWRAPFIGURE
fig=. (((<'|~~~IMLABEL~~~|') ,&.> pidlbls) changestr&.> fig
tex=. ;gtxt ixgx} csgx
NB. append commented out figure templates manual edits
NB. will be required to tune the placement and size of graphics
tex=. tex , ;LF ,&.> fig
end.
end.

NB. comment out any residual text pandoc did not convert
'ixnp csnp'=. ('{[]}' ; '{[]}') cutnestidx tex
if. #ixnp do.
  nptx=. (LF, ' ', CR, ' ')&charsub&.> ixnp{csnp
  tex=. ;((<LF, '%'') ,&.> nptx ,&.> LF) ixnp} csnp
end.

NB. prefix post title
tex=. (postTitleDate ptitle;pdate;url),tex
tex=. tex,LF,tabwarn

'%\input{' ,texpreamble, '}', (2#LF), tex, (2#LF), '%\end{document}''
)

tfwTitles=: 3 : 0

NB.*tfwTitles v-- LaTeX titles from WordPress XML titles.
NB.
NB. WordPress XML title text may contain numerous HTML special

```

```

NB. characters (see HTMLREPS) pandoc converts such characters to
NB. LaTeX equivalents.
NB.
NB. monad: blclTeXTitles =. tfwTitles blclHtmlTitles
NB.
NB. wpxml=. read 'c:/pd/blog/wordpress/analyzethedatanotthedrivel.wordpress.xml'
NB. posts=. ptableFrwpxml wpxml
NB. tfwTitles 1 {"1 posts
NB.
NB. dyad: blclTeXTitles =. clDirectory tfwTitles blclHtmlTitles

TEXFRWPDIR tfwTitles y
:
texdir=. x
btitle=. utf8 BEGINTITLE
'title marker occurs in title text' assert -. 1 e. btitle E. ;y
tempfile=. texdir,TFWTEMPHTML
(utf8 toHOST ;(<btitle,' ') ,&.> y ,&.> <2#LF) write tempfile
tex=. pandoc tempfile
cleartemps tempfile
tex=. (LF,' ') charsub tex -. CR
allwhitetrim&.> (#btitle) }.&.> (btitle E. tex) <;.1 tex
)

timestamp=: 3 : 0

NB.*timestamp v-- formats timestamp as dd mmm yyyy hr:mn:sc
NB.

```

```

NB. monad: cl =. timestamp zu / nlTime
NB.
NB.   timestamp ''           NB. empty now
NB.   timestamp 2007 9 16    NB. fills missing
NB.   timestamp 1953 7 2 12 33

if. 0 = #y do. w=. 6!:0'' else. w=. y end.
r=. }: $ w
t=. 2 1 0 3 4 5 {"1 [ _6 [\ , 6 {"1 <. w
d=. '+++::' 2 6 11 14 17 }"1 [ 2 4 5 3 3 3 ": t
mth=. _3[\ '   JanFebMarAprMayJunJulAugSepOctNovDec'
d=. ,((1 {"1 t) {" mth) 3 4 5 }"1 d
d=. '0' (I. d=' ') } d
d=. ' ' (I. d= '+') } d
(r,20) $ d
)

NB. appends trailing line feed character if necessary
tlf=: ] , ((10{a.)"_ = {:) }. (10{a.)"_

NB. append trailing / character if necessary
t slash=: ] , ('/'"_ = {:) }. '/'"_

NB. converts character strings to CRLF delimiter
toCRLF=: 2&}.@;@;@:((13{a.)&,&.>@<;.1@((10{a.)&,)@toJ)

NB. converts character strings to host delimiter
toHOST=: toCRLF

```

```

NB. converts character strings to J delimiter LF
toJ=: ((10{a.) I.@(e.&(13{a.))@]}  ]>@:(#~ -.@((13 10{a.)&E.@,))

tolower=: 3 : 0

NB.*tolower v-- convert to lower case.
NB.
NB. monad: cl =. tolower cl

x=. I. 26 > n=. ((65+i.26){a.) i. t=. ,y
($y) $ ((x{n) { (97+i.26){a.) x)t
)

uedposts=: 3 : 0

NB.*uedposts v-- lists unedited post files.
NB.
NB. monad: uedposts uuIgnore
NB.
NB.    uedposts 0                      NB. unedited files
NB.    (postfiles -. uedposts) 0 NB. edited files

NB. depends on layout of root file: bm.tex
txt=. '%</blogposts>'&beforestr '%<blogposts>'&afterstr read TEXFRWPDIR,TEXROOTFILE
txt=. allwhitetrim&.> a: -.~ <;._2 tlf txt -. CR
txt=. ('}'&beforestr)@('\input{'&afterstr)&.> ('%' = {.&> txt)#txt
(<TEXFRWPDIR) ,&.> txt
)

```

NB. character list to UTF-8

utf8=: 8&u:

NB. to windows \ character in paths

winpathsep=: '\ '&(('/' I.@:=])) }

NB. writes a list of bytes to file

write=: 1!:2]`<@.(32&>@ (3!:0))

NB.POST_TeXfrWpxml TeXfrWpxml post processor

smoutput IFACE=: (0 : 0)

NB. (TeXfrWpxml) interface word(s): 20230117j223056

NB. -----

NB. BlogHashes NB. update blog hashes

NB. FixBaddown NB. attempt to convert *.baddown files to *.markddown

NB. LatexFrWordpress NB. experimental conversion of Wordpress XML to LaTeX

NB. MainMarkdown NB. assembles *.markdown files in EPUB directory in a master file

NB. MarkdownFrLatex NB. converts edited LaTeX post files to image free markdown

NB. countYearposts NB. adds post counts to table of content lines

)

SetTeXfrWpxmlPaths 0

cocurrent 'base'

coinsert 'TeXfrWpxml'

Index

afterlaststr, 21
afterstr, 21
allwhitetrim, 21
assert, 21
attrvalue, 21

BADDOWNEXT, 9
beforelaststr, 22
beforestr, 22
BEGINTITLE, 9
BESOURCEDELS, 9
BESOURCEPREDELS, 9
BlogHashes, 12
blogimgs, 22
boxopen, 23

cdatatext, 23
changestr, 23
charsub, 24
cleartemps, 24
countYearposts, 25
CR, 10
CRLF, 10
ctl, 26
cutincludegraphicsidx, 26
cutlatexidx, 26
cutnestidx, 27

cutpxtidx, 28
cutstridx, 29

EPUBAMBLE, 6
EPUBFILE, 6, 21
EPUBFRWPDIR, 6, 20, 21

fboxname, 30
ferase, 30
fexist, 30
filenamesFrtid, 30
FILETITLELEN, 10
firstones, 31
FixBaddown, 12
fsize, 31

getNewgraphics, 31

HTMLEXT, 10
htmlParagraphs, 33
HTMLREPS, 6

IFACE, 55
IFACEWORDSTeXfrWpxml, 10
inputposts, 34

jpathsep, 34
justdrv, 35

justext, 35
justfile, 35
justpath, 35

LATEXFIGURETEMPLATES, 8
LATEXFRAGMARK, 10
LatexFrWordpress, 14
LF, 10
lstFrsrcb, 35
LSTLISTINGEND, 7
LSTLISTINGHDR, 6

MainMarkdown, 16
MARKDOWNEXT, 10
MARKDOWNFILE, 7
MarkdownFrLatex, 17
mdfootnotes, 36
MDSECTIONPFX, 11

pandoc, 37
PANDOC CMD, 11
postfiles, 39
postid, 39
posts, 40
posttex, 40
postTitleDate, 38
prunePtable, 41

ptableFrwpxml, 41
read, 43
rmLatexGraphics, 43
ROOTWORDSTeXfrWpxml, 11
SetTeXfrWpxmlPaths, 20
sha1, 44
sha1dir, 45
showpass, 45
smoutput, 45
sortonid, 46
sortonpublishdate, 46
sortposts, 46

SOURCEBLOCKMARK, 11
SOURCEPREMARK, 11
TEMPTEXTFILE, 11
TEXEXT, 11
texFrhtml, 47
TEXFRWPDIR, 7, 20, 21
TEXINCLUSIONS, 7, 21
TEXPREAMBLE, 7, 21
TEXROOTFILE, 7, 21
TEXSECTIONTITLE, 7
TEXWRAPFIGURE, 8
TFWTEMPHTML, 11
tfwTitles, 51

timestamp, 52
tlf, 53
tllslash, 53
toCRLF, 53
toHOST, 53
toJ, 54
tolower, 54
uedposts, 54
utf8, 55
WGETCMD, 12
winpathsep, 55
write, 55