

# TeXfrWpxml Group

John D. Baker

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

SHA-256: b287b045de3374c9d3b906e32434f69a3ded3116db732c9e22893b56e3cfceb4

August 21, 2022

## Contents

<b>TeXfrWpxml Overview</b>	<b>2</b>
TeXfrWpxml Interface . . . . .	2
TeXfrWpxml Notes . . . . .	2
<b>TeXfrWpxml Source Code</b>	<b>4</b>
<b>=: Index</b>	<b>56</b>

## 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 L<sup>A</sup>T<sub>E</sub>X 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/texfrwpxml/TeXfrWpxml.ijs
NB.
NB. https://github.com/bakerjd99/jacks/blob/master/texfrwpxml/wordpressstolatemwith2374.pdf
NB. https://github.com/bakerjd99/jacks/blob/master/texfrwpxml/wordpressstolatemwith2456.pdf
NB. https://github.com/bakerjd99/jacks/blob/master/texfrwpxml/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=#allwhitetr!m 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*

```
phtable=. ptableFrwpxml xml
```

```
posts=. (0{"1 phtable) ,&.> <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=. (allwhitetrail epubamble),LF,('% ',timestamp '),2#LF
```

```
posts=. ; (<mdsecpfx) ,&.> (allwhitetrail&.> 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;EPUBFRWPPDIR;TEXFRWPPDIR) 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. posts without markdown versions*

*if. #newposts=. (epubdir;MARKDOWNNEXT) 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*

allwhitetrim=: ] #~ [: -. [: (\*./\ . +. \*/\ ) ] 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=. ((1 * # 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)@(LF&beforestr)&.> }.ctex

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

```

```

NB. clip old content lines and append new
;(0{ctex) , atocs ,&.> LF&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) cutpxtidx 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.*cutpxtidx v-- cut list into prefix with character terminator
NB. and other.
NB.
NB. monad: (ilIdx ;< blcl) =. (clPfx;caEend;iaPos) cutpxtidx clHtml
NB.

```

```

NB.    ('$latex';'$';1) cutpætidæ ' ... yada yada $latex frac{a}{b}$ and so on ... '
NB.    ('\includegraphics{';'';0) cutpætidæ ' 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 eh'

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

filenamesFrtid=: 3 : 0

NB.*filenamesFrtid v-- form file names from titles and ids.
NB.
NB. monad: blclFilename =. filenamesFrtid btclTitleId
NB.
NB.   wpxml=. read 'c:/pd/blog/wordpress/analyzethedatanotthedriviel.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

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
pttitle,(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/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=. 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
```

```
(TEFRWPPDIR;TEEXT) 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/analyzethedatanotthedrivel.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 ,. icontent) ppxml
(filename$Frtd 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/cowboysandaliensando1698.tex'
NB. rmLatexGraphics tex

rp=. <' '
tex=. <|.2 tlf y -. CR
tex=. ;('%' ~: {.@allwhitetrim&> 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/analyzethedatanotthedrivvel.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 cs'ltxpre'=. pblk cutstridx htm  
  '<pre> block source fragment count mismatch' assert (#ixltxpre) = #ixpre  
  htm=. ;(ixpre{cspre) ixltxpre} cs'ltxpre  
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 cs'ltxrp'=. lfrg cutstridx tex  
  'latex math fragment count mismatch' assert (#ixltx) = #ixltxrp  
  ltx=. ixltx{cs'ltx  
  NB. reset special HTML characters in LaTeX  
  ltx=. HTMLREPS&changeostr.> ltx  
  NB. drop leading $latex and replace with $  
  ltx=. '$' ,&.> (#'$latex ') }.&.> ltx  
  tex=. ;ltx ixltxrp} cs'ltxrp  
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&.> <TEXTWRAPFIGURE
    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/analyzethedatanotthedrive1.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>@0(3!:0))
```

*NB.POST\_TeXfrWpxml TeXfrWpxml post processor*

```
smoutput IFACE=: (0 : 0)
```

```
NB. (TeXfrWpxml) interface word(s): 20220821j93256
```

```
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, 21  
beforestr, 22  
BEGINTITLE, 9  
BESOURCEDELS, 9  
BESOURCEPREDELS, 9  
BlogHashes, 12  
blogimgs, 22  
boxopen, 22  
  
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, 34

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, 38  
postid, 39  
posts, 40  
posttex, 40  
postTitleDate, 38  
prunePtable, 41



ptableFrwpxml, 41  
read, 42  
rmLatexGraphics, 42  
ROOTWORDSTeXfrWpxml, 11  
SetTeXfrWpxmlPaths, 20  
sha1, 44  
sha1dir, 44  
showpass, 45  
smoutput, 45  
sortonid, 45  
sortonpublishdate, 46  
sortposts, 46

SOURCEBLOCKMARK, 11  
SOURCEPREMARK, 11  
TEMPTEXFILE, 11  
TEXEXT, 11  
texFrhtml, 46  
TEXFRWPDIR, 7, 20, 21  
TEXINCLUSIONS, 7, 20  
TEXPREAMBLE, 7, 20  
TEXROOTFILE, 7, 20  
TEXSECTIONTITLE, 7  
TEXWRAPFIGURE, 8  
TFWTEMPHTML, 11  
tfwTitles, 51

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