

# TeXfrWpxml Group

John D. Baker

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

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## 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](#) and [EPUB](#) 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-ij-s-part-3/>

## TeXfrWpxml Interface

BlogFreqs	[12]	<i>frequencies of file extensions in blog folders</i>
BlogHashes	[12]	<i>update blog hashes</i>
FixBaddown	[14]	<i>attempt to convert *.baddown files to *.markddown</i>
LatexFrWordpress	[15]	<i>experimental conversion of Wordpress XML to LaTeX</i>
MainMarkdown	[17]	<i>assembles *.markdown files in EPUB directory in a master file</i>
MarkdownFrLatex	[19]	<i>converts edited LaTeX post files to image free markdown</i>
countYearposts	[26]	<i>adds post counts to table of content lines</i>
retocidNavposts	[45]	<i>reset list item table of content ids in nav_xhtml</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 in 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 own 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. retocidNavposts  - reset list item table of content ids in nav_xhtml
NB.
NB. author:  John D. Baker
NB. created: 2012feb10
NB. -----
NB. 12feb24 (MarkdownFrLatex) added

```

*NB. 12feb27 (FixBaddown, MainMarkdown) added*  
*NB. 12feb29 (blogimgs) 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 (filenamesFrtid) adjusted to extract titles from new <![CDATA['s*  
*NB. 22jul19 (countYearposts) added*  
*NB. 23apr10 switch (BlogHashes) to sha-256*  
*NB. 23apr12 use configured folders ~BLOGTEX, ~BLOGMD if defined*  
*NB. 23may02 add timestamp to (BlogHashes)*  
*NB. 24feb20 (retocidNavposts) 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 jqt 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=: (OPENSSSL , ' 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 ' BlogFreqs BlogHashes FixBaddown LatexFrWordpress MainMarkdown MarkdownFrLate  
>..>x countYearposts retocidNavposts'

*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 ' BlogFreqs BlogHashes FixBaddown IFACEWORDSTeXfrWpxml LatexFrWordpress MainMar  
>..>kdown MarkdownFrLatex ROOTWORDSTeXfrWpxml SetTeXfrWpxmlPaths blogings countYearposts postfiles posttex ret  
>..>ocidNavposts showpass uedposts'

*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*

TEMPTEFILE=: '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='

BlogFreqs=: 3 : 0

*NB.\*BlogFreqs v-- frequencies of file extensions in blog folders.*

*NB.*

*NB. monad: bt =. BlogFreqs uuIgnore*

*NB. j profile !(\*)=. dirtree jpath jpath\_j\_*

cfgs=. ' ~BLOGWP ~BLOGTEX ~BLOGMD ~BLOGCLD'

('not all folder(s) configured: ',cfgs) assert iscf&> bf=. <;.\_1 cfgs

freqlist justext&.> {."1 ;dirtree@jpath&.> bf

)

BlogHashes=: 3 : 0

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

*NB.*

*NB. monad: BlogHashes uuIgnore*

```

NB. system word !(*)=. jpath
cfigs=. ' ~BLOGWP ~BLOGTEX ~BLOGMD ~BLOGCLD'
('blog folders not set: ',cfigs) assert iscf&> <;._1 cfigs

hstamp=. ' Last SHA256 hash: ',(timestamp ''),LF

texpath=. jpath '~BLOGTEX/'
hash=. ctl ;"1 ' ' ,&.> sha256dir texpath,'*.tex'
NB. hash=. ctl ;"1 ' ' ,&.> sha256dir texpath,'*.pdf'
(toJ hstamp,hash) write texpath,'bmpdfsha256.txt'

mdpath=. jpath '~BLOGMD/'
hash=. ctl ;"1 ' ' ,&.> sha256dir mdpath,'*.epub'
NB. hash=. hash, LF, ctl ;"1 ' ' ,&.> sha256dir mdpath,'*.azw3'
NB. hash=. hash, LF, ctl ;"1 ' ' ,&.> sha256dir mdpath,'*.mobi'
hash=. hash, LF, ctl ;"1 ' ' ,&.> sha256dir mdpath,'*.markdown'
(toJ hstamp,hash) write mdpath,'bmepubsha256.txt'

xhtmlpath=. jpath '~BLOGMD/xhtml/'
hash=. ctl ;"1 ' ' ,&.> sha256dir xhtmlpath,'*.xhtml'
hash=. hash, LF, ctl ;"1 ' ' ,&.> sha256dir xhtmlpath,'*.css'
hash=. hash, LF, ctl ;"1 ' ' ,&.> sha256dir xhtmlpath,'*.ncx'
hash=. hash, LF, ctl ;"1 ' ' ,&.> sha256dir xhtmlpath,'*.jpg'
(toJ hstamp,hash) write xhtmlpath,'bmexhtmlsha256.txt'

onedrvpath=. jpath '~BLOGCLD/'
hash=. ctl ;"1 ' ' ,&.> sha256dir onedrvpath,'*.pdf'

```

```
hash=. hash, LF, ctl ;"1 ' ' ,&.> sha256dir onedrvpath,'*.epub'
pubhash=. toJ hstamp,hash
pubhash write onedrvpath,'bmssha256.txt'
pubhash write jpath '~BLOGWP/bmssha256.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/analyzethedatanotthedrive1.wordpress.xml'
NB.    LatexFrWordpress '/home/john/pd/blog/wordpress/analyzethedatanotthedrive1.wordpress.xml'
NB.
NB. dyad: (iaRc;blcl) =. (clRoot;clPreamble;clDir;clIncl) LatexFrWordpress clPathFileXML

NB. LaTeX file & directory defaults

```

```
(TEXROOTFILE;TEXPREAMBLE;TEXFRWPDIR;TEXINCLUSIONS) LatexFr Wordpress 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/analyzethedatanotthedrivel.wordpress.xml'*

*NB.*

*NB. dyad: bl =. (clMdownfile;clDirectory;clAmble) MainMarkdown clPathFile*

```
(MARKDOWNFILE;EPUBFRWPDIR;EPUBAMBLED;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=#allwhitetrims 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 cleartemps 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 words !(*)=. IFWIN IFUNIX jpath
if. 0 0 -: ([ -: jpath)&> '~BLOGMD'; '~BLOGTEX' do.
  NB. use configured folders if both exist
  TEXFRWPDIR=: jpath '~BLOGTEX/'
  EPUBFRWPDIR=: jpath '~BLOGMD/'

```

```
elseif. 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=. ((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;HMTLEXT) 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)@]))

cutincludgraphicsidx=: 3 : 0

NB.*cutincludgraphicsidx v-- cut list into \includgraphics
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) cutpxtidx ' ... yada yada $latex frac{a}{b}$ and so on ... '
NB. ('\includegraphics{';'}';0) cutpxtidx ' 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/analyzethedatanotthedrivetl.wordpress.xml'
NB.   posts=. ptableFruwpxml 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. frequency distribution of boxed list items*  
freqlist=: ~. ,: [: <"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.
)

iscf=: 3 : 0

NB.*iscf v-- is configured folder (1 folder set, 0 otherwise): iscf '~JACKS'
NB.
NB. NOTE: using explicit to stop JOD dependency searching.
NB.
NB. monad: clPath =. iscf clCfg

NB. j profile - do not look further !(*)=. jpath_j_
-.(jpath_j_ y) -: y
)

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~~~|',allwhitetrail ptitle
reps=. reps,'|~~~POSTURL~~~|',allwhitetrail purl
ptitle=. 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

(TEXTFRWPDIR;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/analyzethedatanotthedrive1.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$Frtid 0 1 {"1 ppxml) ,. ppxml
)

```

```

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

retocidNavposts=: 3 : 0

NB.*retocidNavposts v-- reset list item table of content ids in nav_xhtml.
NB.
NB. monad: cl =. retocidNavposts clXhtml
NB.
NB. nav=. read jpath '~BLOGMD/xhtml/nav.xhtml'
NB. nav_new=. retocidNavposts nav
NB. nav_new write jpath '~BLOGMD/xhtml/nav_new.xhtml'

NB. cut into toc items and other
'idx strs'=. '<li id="toc-li-' cutstridx y

NB. clip trailing id nos from strs after toc items
afstrs=. (>:idx) -. #strs
strs=. (('"'>'&,)@('"'>'&afterstr)&.> afstrs{strs) afstrs} strs

NB. renumber toc ids
;((idx{strs) ,&.> ":&.> <"0 i. #idx) idx} strs
)

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=. ;('%' ~: {.@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

```

)

*NB. sha-256 hash from bytes: sha256 'hash me again'*  
 sha256=: 3&(128!:6)

sha256dir=: 3 : 0

*NB.\*sha256dir v-- compute sha256 hashes for files matching pattern in directory.*

*NB.*

*NB. monad: btcl =. sha256dir clPathRoot*

*NB.*

*NB. sha256dir '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) ,.~ sha256 @ 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 ,&.> <MARKDOWNNEXT
)
```

```
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/analyzethedatanotthedrivel.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 csltx'=. cutlatexidx htm  
if. #ixltx do.  
    'latex fragment marker in .html' assert -. 1 e. lfrg E. htm  
    htm=. ; (<lfrg) ixltx} csltx  
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 csltxpre'=. pblk cutstridx htm  
    '<pre> block source fragment count mismatch' assert (#ixltxpre) = #ixpre  
    htm=. ;(ixpre{cspre) ixltxpre} csltxpre  
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 cslltxrp'=. lfrg cutstridx tex
  'latex math fragment count mismatch' assert (#ixltx) = #ixltxrp
  ltx=. ixltx{cslltx
  NB. reset special HTML characters in LaTeX
  ltx=. HTMLREPS&changestr&.> ltx
  NB. drop leading $latex and replace with $
  ltx=. '$' ,&.> (#'$latex ') }&.> ltx
  tex=. ;ltx ixltxrp} cslltxrp
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 < #&> gttx do.
  gfiles=. gmsk#gttx
  gttx=. (<'\\includegraphics{'> ,&.> gfiles ,&.> '}'
  ixgx=. gmsk#ixgx
  pidlbls=. (<pid,'X') ,&.> " :&.> <"0 i.#ixgx
  fig=. ((<'|~~~IMGRAPHICFILE~~~|') ,&.> gfiles) changestr&.> <TEXWRAPFIGURE
  fig=. ((<'|~~~IMLABEL~~~|') ,&.> pidlbls) changestr&.> fig
  tex=. ;gttx 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
```

```
allwhitetrims (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=. allwhitetrims. 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.*

```
(".;(0=nc <'SHOWSMO_ijod_'){'1';'SHOWSMO_ijod_') smoutput IFACE=: (0 : 0)
```

```
NB. (TeXfrWpxml) interface word(s): 20240228j134122
```

```
NB. -----
```

```
NB. BlogFreqs          NB. frequencies of file extensions in blog folders
```

```
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
NB. retocidNavposts    NB. reset list item table of content ids in nav_xhtml
)
```

```
SetTeXfrWpxmlPaths 0
```

```
cocurrent 'base'
coinsert  'TeXfrWpxml'
```

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