Webnotes: Practical variations

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Over the past several years, I was involved with three published papers that had many more endnotes and references than could fit within the publishing journal's page quota. Instead, some of the less important notes and references were posted on the Web; we called them "webnotes". Thus we needed methods of generating a separate set of notes than those that were part of the published paper and ways of cross referencing between webnotes and the published papers. We (the authors and I) used a slightly different approach to the generating and cross-referencing in each case.

The three papers were all published in the *IEEE Annals of the History of Computing.* They were:

- The Font Wars, parts 1 and 2, by Charles Bigelow, *Annals* vol. 42, no. 1, 2020
- Interleaf, Inc.—1981 to 2000, by Mark Dionne and David Walden, *Annals* vol. 42, no. 1, 2020
- TeX: A branch in desktop publishing evolution, parts 1 and 2, by Barbara Beeton, Karl Berry, and David Walden, *Annals* vol. 40, no. 3, 2018, and vol. 41, no. 2, 2019

All three papers were part of the history-of-desktop-publishing project described at `history.computer.org/annals/dtp`. The Interleaf and TeX papers were composed in LaTeX; the Font Wars paper was composed in Word.

1 Webnotes for the TeX paper

For the earliest paper, on TeX history, Karl Berry and I chose to model our webnotes approach on non-fiction books which avoid footnotes and even superscripted note numbers in the main text by starting each note or reference at the end of the book with a page number from the main text and a short quote from that page indicating the virtual position in the main text of the end-of-book note. Perhaps you have seen such a book. An example of our webnotes in this style is at `tug.org/pubs/annals-18-19/part-2-webnotes.pdf`.

We used the LaTeX endnotes package for the notes and references that fit within the journal's page quota, and they were referenced from the main text with a single sequence of superscripted numbers (as in this paper).

For the webnotes, I modified the endnotes package and called it `Webnotes.sty`. My approach to the modification was trial and error. I only changed enough to get the capability we needed (I didn't do a complete rework of the package). Mainly I searched for instances of the text "endnote" and replaced "end" by "Web". I also added a few commands to the paper's main LaTeX file to interface to the modified style file. My trial and error approach is useful because it allows me to change LaTeX or its packages to accomplish what I need even though I don't have real LaTeX expertise.

See Appendix A for more details.

2 Webnotes for the Font Wars paper

The Font Wars paper was composed in Word by its author. He and I also decided to have webnotes for the notes and references that would not be included in the published paper. He put the text "[Note n]" in his Word file where he wished he could have another note or reference, and he put all the notes to go on the Web in a separate Word file where each note had a heading like "**Note** n". (With a change of which part of IEEE produced the *Annals*, we hoped that putting webnote numbers in the published articles would be possible, and they accepted this approach.)

The author sent that file to me, and I put a Word bookmark at each instance of "**Note** n" throughout the file and added to the top of the file a list of note numbers with links to the bookmarks. You can see the result at `history.computer.org/annals/dtp/fw`. The HTML version of the file was created with "Save As `.html`" in Word, and the PDF file was done using Word's "Save As `.pdf`" option for PDF/A. Word's `.docx` to HTML conversion has some limitations, but it is good enough.

3 Webnotes for the Interleaf paper

The Interleaf paper used superscripted lowercase letters in the main text to refer to webnotes. An example of this is in line 51 at `tug.org/TUGboat/tb41-1/webnotes/interleaf-main-page.pdf`. Using the letters required a small modification to what had been done in modifying the endnotes package for the TeX history paper, which was then renamed `ILWebnotes.sty`. Again my approach to modifying the `.sty` file included trial and error; however, in the end I asked Karl Berry how to do something I seemed unable to figure out.

See Appendix B for more details.

4 Observations

I enjoyed having LaTeX available to create the webnotes for the TeX and Interleaf history papers. I would not have tried to create the HTML version of webnotes for the Font Wars paper had this not been easy to do with Word.

Appendix A

You can see `Webnotes.sty` at `tug.org/TUGboat/tb41-1/webnotes/tex-webnotes.txt` and compare it with the

unmodified `endnotes.sty`. The following went in the preamble of our LaTeX file and is explained below.

```
%for webnotes for published version
\newcounter{Mythepage}
%set starting page number
\addtocounter{Mythepage}{29}
\def\Nextpage{\stepcounter{Mythepage}}

%for webnotes published or not
\makeatletter \input{Webnotes.sty}\makeatother
\newcounter{Webnotecounter}
\def\Webnotecnt{\stepcounter{Webnotecounter}%
  \theWebnotecounter}
\def\ieeecsNonDisplayingText#1#2%
  {\textsuperscript{}%
  \Webnotetext[\theMythepage]% thepage or
                            % theMythepage
  {\quad\textbf{#1}\quad{}#2\vspace{4pt}}}
                         %[\Webnotecnt]}}
```

The following went at the end of the file:

```
\pagestyle{empty}%no page numbers on webnotes
\newpage
%webnotes don't have a section heading
\renewcommand{\notesname}{}
%the webnotes do have a header and
    %some explanation about the webnotes
\textbf{Additional references and notes for
  \TeX: A branch in desktop publishing
        evolution}
... explanation about end notes ...
{\frenchspacing\theWebnotes}
```

I will come back to the first five lines of the commands added to the preamble. The next three commands load the modified style file (I didn't bother to think about how to make `\usepackage` work). The next three lines define a webnote counter for use in superscripted webnote numbers; we didn't think the IEEE would allow us to use these in the published paper, but they are handy to have for composing the paper and its webnotes.

The rest of the lines for the preamble define a new command to use like `\endnote` in the main text. It has two arguments: a quote from the main text, and the webnote itself. (We were submitting our paper using an IEEE style which didn't allow any user defined commands; helpfully, however, the IEEE style maintainer was willing to add the command `\ieeecsNonDisplayingTex` to the IEEE style defined to throw away its two arguments. Thus we didn't have to embed our webnote commands in if-statements that were switched on and off depending if the output was for us or the IEEE.)

The (empty) argument of the `\textsuperscript{}` command in the first line of the definition produces a superscript in the main text — nothing in the published version. However, while composing and editing the paper, we could have the command [\Webnotecnt] be the argument of the `\textsuperscript` command, and `\Webnotecnt` would increment our webnote counter and put a superscript number in the main text (the

square brackets are to distinguish the webnote numbers from the regular endnote superscripted numbers). When doing this for ourselves, we replaced the two final right curly braces of the definition with the text in the comment on the next line, passing the webnote number to the webnote pages.

Now let's look at the first five lines added to the preamble that I skipped over above. A new page number counter is defined and set to 29, which was the first page of part 2 of the paper in the published journal. With the published paper in hand, I found in our LaTeX file the locations of page breaks in the published paper and inserted a call there to `\Nextpage` which steps our page counter. (While we developed the paper, we instead used `\thepage`, so the page numbers were numbered from 1.) The command `\Webnotetext` on the third line of the definition of `\ieeecsNonDisplayingText` passes this page number to the webnotes pages via the `.Went` file. (A generic call to `\endnote` puts macro calls and the note text, etc., in a file named `\Jobname.ent`; and `\theendnotes` inputs that file, and its macro calls output the endnotes.)

Appendix B

For the Interleaf history paper, I added the following code to the preamble of the LaTeX file, where `\Noprint` is the command name instead of `\ieeecsNonDisplayingText` as it was in Appendix A. Some explanations are given in comments.

```
\usepackage{alphalph}%generate letter sequence
\makeatletter %same as in Appendix A
\input{ILWebnotes.sty}\makeatother
\newcounter{Webnotecounter}
%
%next definition steps the webnote counter;
 %\alpha will be executed as \Noprint is called
\def\Webnotecnt{\stepcounter{Webnotecounter}%
  \alphalph{\theWebnotecounter}}%
%
%similar to how things worked in Appendix A,
 %except the \Noprint definition puts a
 %superscript lowercase letter in the main text;
 %and \Webnotetext passes the quote, note, and
 %note number to the .Went file for later
 %processing into the webnotes.
\long\def\Noprint#1#2{%
  \textsuperscript{\Webnotecnt}%
  \Webnotetext[\theWebnotecounter]%
      {\quad\textbf{#1}\\\quad{}#2\vspace{4pt}}}
```

There was stuff at the end of the file as in the TeX history paper, ending with `{\frenchspacing\theWebnotes}`. Finally, the additional change to `Webnotes.sty` for `ILWebnotes.sty` (for letters instead of numbers): `\def\theWebnote{\@arabic\c@Webnote}` to `\def\theWebnote{\alphalph{\c@Webnote}}`.

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