



Your Résumé, Part 2

Jeffrey Copeland

(copeland@alumni. caltech.edu) is at Softway Systems Inc. in Boulder, CO, working on UNIX internationalization. He spends his spare time rearing children, raising cats, and being a thorn in the side of his local school board.

Jeffrey S. Haemer (jsh@usenix.org) works at QMS Inc. in Boulder, CO, building laser printer firmware. Before he worked for QMS, he operated his own consulting firm, and did a lot of other things, like everyone else in the software industry. ast month, we started developing a troff macro package for résumés. We left off just as we were getting to the definitions of useful fancy text strings. We also promised the setup for a Web version of the résumé, by (ab)using nroff to generate HTML output.

Fancy Strings and Setup

The last set of definitions we need in the macros are for some strings we'll use, which we provide in separate troff and nroff renditions. We start with the name of a popular typesetting system, TeX.

```
.\" set up some fancy strings
.ie t .ds TX T\h'-.1667m'\v'.25m'E\
\v'-.25m'\h'-.125m'X
.el .ds TX TeX
```

Then, the name of the font generation tool that goes with it. We explicitly set this in Helvetica: We would normally set it in the TeX manfnt, but this is the closest font that we're guaranteed to have.

.ie t .ds MF \fH\s-1METAFONT\s0\fP .el .ds MF METAFONT Adobe's practice.

.ie t .ds Ps P\s-20ST\s0S\s-2CRIPT\s0 .el .ds Ps PostScript

Then, the name of a company where we used to work, again rendered to match the practice at that company.

.ds IN \s-1INTERACTIVE\s0

Last, we make special strings for the names of our favorite typesetting tools because we'll be using them a lot.

.ds Nr \f2nroff\fP .ds Tr \f2troff\fP

The very last thing in the macro package is setup for the actual page size, tab stops and the like:

.11	7i	-	
.lt	7i	-	
.ev	1		
.11	7i	-	
.lt	7i	-	
.ev			
.if	t	.po	.75i
.if	n	.po	5m

We use small caps when we can, to match

We begin by setting up the page and title length in both the main and page heading environment. We set the page offset to center the text on the page, or, in nroff, to give us a left margin. We define a string for the tab character, which we're sure to need. We can use hard tabs in running text, but it's convenient to be able to see them. Because we can't use troff's.\t character in text, this string makes the tabs visible:

.ds T \t

We begin with a ragged right margin, no hyphenation and $4^{1/2}$ lines (that is, 54 points) down the page.

.na .nh .sp |4.5v

Because of the typical font load in a PostScript printer, we make the type slightly bigger and leave a little extra space between the words. (These lines used to be enclosed in an if directive that checked the printer name, available in troff in the .T string, but we found that, in practice, we only used PostScript printers.)

```
.\" the following 3 lines are
.\" setup for PostScript printers
.ps 11
.vs 12.375p
.ss 15
```

We want to use the tilde for unbreakable spaces, and we set up the tab stops based on the point size we use.

```
.tr ~
.ta 1.1i*\n(.su/10u +.5i +.5i +.5i +.5i
```

If we've set the H number register, we want to produce the HTML version of the résumé, and we invoke an addendum to the macros in the file html.mac:

.if n .if \nH .so html.mac .if t .if \nH .ab ^G^G^G======= \ can't do html in troff!!!!

OK, we could have defined the main résumé macros in a way that included the HTML stuff in parallel using *ifs*, but it's cleaner and makes for easier reading to just supplement the original definitions with a separate macro file.

The HTML Version

We'll discuss the special-case HTML macros before we discuss the text of the résumé, because there are some odd things in the text required for the multiple output versions. What we're doing here is using a formatter to generate input for another formatter: We're taking our résumé source and pushing it through nroff to generate HTML, which will be formatted by the interpreter in a browser. Because HTML gets formatted on the fly based on the size of the window into which it's being displayed, and because we only have limited formatting directives, some of the elements of our very fancy troff version will be lost.

```
.\" reset the page offset
.po 0
```

The only special setup we need for the HTML version is to reset the page offset. This isn't strictly necessary, but it makes the HTML easier to read and debug. However, we must have

```
.\" font change macros
.de i
<I>\\$1</I>
..
.de b
<B>\\$1</B>
..
.de c
.br
.ie \w@\\$3@ <A HREF="\\$3">
.el <A HREF="\\$1">
.br
.TT>\\$1</TT></A>\\$2
```

These override the font-change macros we built in the typesetting version. Notice that we're allowing a third argument to the c macro. In general, we use Courier in the résumé for references to addresses, for example, our email address, or as a pointer to a personal Web page.

This third argument allows us to add an active link in the HTML version. For example,

.c jsh@usenix.org ";" mailto:jsh@usenix.org

will generate the HTML

 <TT>jsh@usenix.org</TT>;

We also need some macros for paragraphs:

```
.\" html versions of paragraphing
.de BR
<BR>
..
.de PP
<BR>
..
.de IP \" indented paragraph
<BR>&nbsp;&nbsp;&nbsp;
..
.de HP \" hanging paragraph
<P>
..
```

We add the BR macro, which will be ignored when we generate

the troff version-except that it will generate a warning message from groff. We'll use BR between lines in centered text, because HTML won't let us center a block paragraph. The other paragraph macros are pretty simple translations, except that IP uses the nonbreaking space character, <code> </code>, which may not be recognized by all browsers. David Siegel (http://www. dsiegel.com) recommends using GIF files containing white space of a specified width as a workaround for this.



Our HTML-generating rendition of the bullet list macros makes an interesting study. In our résumé, we use three levels of list, and each item is tagged with one of the list item macros. For troff output, each one of those macros begins by doing a hard set of the indent and outputting the tag.

In the HTML version, we use the native HTML unordered list construct to generate the outline. However, as in the troff mm macros, we need to bracket the unordered lists with a begin/end directive pair. For HTML, these are and .

We invent an internal list end macro, LE, which keeps track of how many levels deep we are in the list (with the LT number register), and outputs an appropriate number of 's and 's when we change levels in the outline.

```
.\" special nested bullet lists
.de BU \" bullet list item for summary
.LE 1
<LI>
..
.de DA \" dashed list item for summary
.LE 2
<LI>
..
.de SB \" item line for summary
.LE 3
<LI>
..
.de LE \" list begin/end
.nr *d \\$1-\\n(LT
```

.if \\n(*d=-1
.if \\n(*d=-2
.if \\n(*d=2
.if \\n(*d=1
.if \\n(*d=1
.nr LT \\\$1

HTML Pages and Sections

We also need to override some of the page breaking macros and directives we have relied on in the troff version:

.\" page break handling

- .rm BP
- .de bp
- ••

. .

We totally remove the top-of-page handling-actually, this is a redundant exercise because HTML is generated by nroff, for which we've set the page length to one line, so the top of page handling is never done. We also override the native nroff page-break directive, bp, because we don't need to do real page breaks when we're formatting for HTML.

We also need HTML output versions of the main structural elements of the résumé.

```
.\" resume structural markup
.de SC \" begin section
<HR><FONT SIZE=+1><I>\\$1</I></FONT><BR>
..
```

A section is marked by a horizontal rule, and an italic label in a slightly larger point size.

```
.de NJ \" new job
.tr #-
<P>
<I> [[\\$1]]
.if \w@\\$2@ \\$2.
.ie \w@\\$4@ \\$3, \\$4:</I>
.el \\$3:</I>
.tr --
..
```

The new job macro is almost identical to its troff sibling but places the line introducing the job in italics. It does not rely on tab stops or other setup; it merely drops the arguments given to NJ into the output in order.

We should have a special version of the top-of-first-page title block with our name and address information:

```
.de PH \" 1st page title block
<HTML>
<TITLE>\\*(Jf's Resume</TITLE>
<BODY>
<CENTER>
<FONT SIZE=+1>
<B><I>\\*(JF</I></B>
```

```
</FONT>
.BR
\\*(A1
.BR
\\*(A2
.BR
\\*(A3
.BR
.c \\*(J@ mailto:\\*(J@
</CENTER>
```

We also need to override the troff three-part title directive, because its output would be meaningless when the HTML is (re)formatted by the browser. We just enclose its arguments in an HTML comment, though we could also ignore them.

```
.\" replace the nroff tl directive
.de tl
<! -- \\$1 -->
..
```

In the troff version, we had an end macro that generated a page footer on the last page containing the date we printed the résumé. Here, we'll add it in small type at the bottom of the HTML output. But more important, we have to close the HTML body:

```
.\" html resume end macro
.de EM
<P><FONT SIZE=1>(\\*(PD)</FONT><P>
</BODY></HTML>
..
```

Whew! That covers two different versions of the macros, which support some major differences in their output with only minor differences in the text we input. Now it's time to look at that text.

The Résumé Text

We begin the text with the string definitions for name and address we talked about earlier:

```
.ds JF \s+2J\s0EFFREY \s+2L C\s0OPELAND
.ds Jf Jeffrey L Copeland
.ds J@ copeland@alumni.caltech.edu
.ds A1 1085 Albion Road
.ds A2 Boulder, Colorado 80303
.ds A3 303-499-8924
```

Notice that we've got two versions of the full name: one with small caps, one with lowercase. We'll immediately turn around and invoke the first page header macro:

.PH

We can proceed from there with the executive summary:

```
.\" summary
.sp .66i
.in 1i
.in +3m
```

We've dropped two-thirds of an inch down the page before beginning the summary list itself. As we discussed earlier, we'll assume some base left margin indent, which we've also set up. From there, we can start dropping in bullet items:

```
.BU
Technical skills:
.DA
Very experienced UNIX/C developer
.SB
Developer of systems and applications software
.....
.BU
Good communications skills
.DA
Monthly columnist for
.i SunExpert
magazine
```

At the end of our bullet list, we need to close out the unordered list in the HTML output, reset that page offset and set up the résumé proper: In the nroff version, we draw a line; in troff, we start a new page; and in HTML, we rely on the first subsection header to draw a horizontal rule.

```
.if \nH .LE 0
.in 0
.if t .bp
.if n .if !\nH \l'\n(.lu'
```

In the case of troff only, we need to do some fancy setup at the top of the page:

```
.if t \{\
.sp -2v
.ce 1
\*(JC
.sp .3v
.if !\nA .tl |\s10\*(A1, \*(A2|\
|\fC\*(J@\f1, \*(A3\s0|
\l'\n(.lu'
.\}
```

We begin by going back two lines, because the top of page macro has dropped us too far down the page–this probably means that our top-of-page processing isn't sufficiently general. After centering our name, we reiterate our addresses, physical, electronic and telephonic; though we can ask for those to be omitted by turning on the A number register. Last, we draw a horizontal rule.

At this point–nearly at the end of this second column on the subject–we can begin supplying text to the résumé.

.SC Objective .HP A job as the Chief Executive Officer of a Fortune 500 company, like Disney, AT&T, or Apple, that will supply me with a megabuck severance package.

Of course, we'd also like to supply some information about the jobs we've had:

```
.SC Experience
.NJ "11/94#8/97" \
 "Senior Member of the Technical Staff" \
 "QMS, Inc" "Boulder, Colorado"
.PP
.MG
Interim manager of languages group,
from December 1995 to August 1996.
.IP
.VE
QMS's representative to the Printer
Working Group,
a printer industry consortium
and standards-making body.
See PWG web pages, at
```

.c http://www.pwg.org/.

Notice that we've used a couple of the tricks we outlined above: We're including a paragraph about management responsibility only in the management version of the résumé. We're also allowing a pointer to an external Web page from our HTML version.

We could go on in the same vein for a while, but you've seen the basic structure and how to use

it. If you're interested in seeing a full résumé using these macros, we've included an example with the software bundle for this column.

Now, Go Get a Job!

That's it. You've got the basic tools to produce a fancy résumé in several different forms. The macro package, along with all the software we write for this column, is available at http:// alumni.caltech.edu/~copeland/work.html. Use it in good health. We'd love to hear from you if you think of improvements to these macros.

Until next month, happy trails. 🖌