Typographers' Inn

Peter Flynn

1   Font installer

A long time ago I wrote a shell script to install Post-Script Type 1 fonts from the old Bitstream 500–font CD. Using a combination of parsing the .afm files, matching the fontname map files, and some low animal cunning, it created .fd, .sty, and .map files, put them and the generated .tfm and .vf files in the 'right places' (according to the TDS), and ran *updmap* to leave the user with an immediately-usable typeface. The *fontinst* package does this too, but I was never able to make it work.

The *cdvf* script is still available at http://latex.silmaril.ie/fonts/cdvf (it was never robust enough to upload to CTAN), but I had always planned to rewrite it to handle other pairs of .pfb and .tfm files acquired elsewhere.

My university recently got rebranded, as part of which the default text typeface was made Gotham, which I hadn't had occasion to use before. I therefore created a revised script for them, *psfi*, optimistically standing for the PostScript Font Installer. This now seems to do the job for any .pfb/.tfm pairs, grouping them into separate faces if required, each with its own .sty and .fd files, which is needed for large font families like Gotham (Figure 1).

What it revealed (which I should have known if I had been paying attention) is that the font-naming scheme which has served well for many years is now running out of space, especially in the Foundry department, hence the x in the fontname. This problem will eventually go away, of course, when everyone switches to using X⅂ATEX, but I still have many clients who won't be making that journey in the foreseeable future.

I'm not a huge fan of sans-serifs for body copy in long documents, although having read some test settings, I found Gotham to be easier on the eyes in quantity than, for example, Futura or Gill Sans (but that may just be my ageing eyes). There don't appear to be any math fonts in Gotham, however, so there will either have to be some trickery done with faking it in MathDesign with something that looks similar, or the standard will need a variant to allow TEXnical TEXts to be set in a serif face.

This time I *will* upload the script to CTAN, in the hope that others can test it and show me what goes wrong. Look for it at a server near you soon.

2   Class and package creation

The one thing that *psfi* doesn't do is wrap the whole result up as a .dtx/.ins pair of files for redistribution, although technically it could do that for everything except the proprietary font files themselves. But that will have to wait.

What has not been able to wait is some work I had to do on some XML-based software for assisting the creation of class and package files for clients. This is still an in-house development, although I used it for the decorule package, referred to it in an aside in my last column, and am hoping to be able to show some of it at a suitable TUG or Balisage meeting.

Among the typographic tweaks are some extensions using the dox package for marginal tags for more than just macros and environments; a by-product of the preprocessing is that the margin can be dynamically re-set for the relevant chapters, to accommodate the widest tag referenced, which improves the usability. Whether a margin-change between the user documentation chapter and the code documentation chapter is good typography is moot, although using a narrow font variant for the tags minimises the disruption.

3   Grids

One of the packages was for a client whose designer used the traditional grid system for the document layout. Coercing LATEX into a rigid grid isn't particularly easy, as the underlying convention is that every block object on the page is separated from its neighbours by rubber space. This drives designers into screaming fits; when they wake sweating at 3am, it's LATEX's breaches of the grid they were having a nightmare about.

In practice, tables, figures, sidebars, and display math rarely come in nice neat multiples of the baseline height, even when everything else (the title page, headings, paragraphs, lists, etc.) can be re-spaced to do so (Figure 2).

One of the methods is to set the object into a box, measure its height and depth, and then add white-space in increments to make it an integer number of baselines high. This works, at the expense of some extra cycles (usually irrelevant on modern machines); and the same principle can be used for any repetitive layout where the baselines of certain objects have to be multiples of a specific depth from the top of the page or from each other.

However, what turned out to be more difficult was getting subsection headings to have no extra vertical white-space below them, before the first line of the paragraph. This is no problem when \parskip is zero, despite \@startsection placing a \par after

Table 6: Fonts installed (continued)

Source	Font	Series	Shape	Fontname	Example
GothamCond-Medium	Gotham Condensed	mc	n	xgcm8rc	The glib czar junks my VW Fox PDQ
GothamCond-Medium	Gotham Condensed	mc	sc	xgcmc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-MediumItalic	Gotham Condensed	mc	it	xgcmi8rc	The glib czar junks my VW Fox PDQ
GothamCond-Book	Gotham Condensed	kc	n	xgck8rc	The glib czar junks my VW Fox PDQ
GothamCond-Book	Gotham Condensed	kc	sc	xgckc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-BookItalic	Gotham Condensed	kc	it	xgcki8rc	The glib czar junks my VW Fox PDQ
GothamCond-Bold	Gotham Condensed	bc	n	xgcb8rc	The glib czar junks my VW Fox PDQ
GothamCond-Bold	Gotham Condensed	bc	sc	xgcbc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-BoldItalic	Gotham Condensed	bc	it	xgcbi8rc	The glib czar junks my VW Fox PDQ
GothamCond-Black	Gotham Condensed	cc	n	xgcc8rc	The glib czar junks my VW Fox PDQ
GothamCond-Black	Gotham Condensed	cc	sc	xgccc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-BlackItalic	Gotham Condensed	cc	it	xgcci8rc	The glib czar junks my VW Fox PDQ
GothamCond-Ultra	Gotham Condensed	uc	n	xgcu8rc	The glib czar junks my VW Fox PDQ
GothamCond-Ultra	Gotham Condensed	uc	sc	xgcuc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-UltraItalic	Gotham Condensed	uc	it	xgcui8rc	The glib czar junks my VW Fox PDQ
GothamCond-XBlack	Gotham Condensed	xc	n	xgcx8rc	The glib czar junks my VW Fox PDQ
GothamCond-XBlack	Gotham Condensed	xc	sc	xgcxc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-XBlackItalic	Gotham Condensed	xc	it	xgcxi8rc	The glib czar junks my VW Fox PDQ
GothamCond-Thin	Gotham Condensed	ac	n	xgca8rc	The glib czar junks my VW Fox PDQ
GothamCond-Thin	Gotham Condensed	ac	sc	xgcac8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-ThinItalic	Gotham Condensed	ac	it	xgcai8rc	The glib czar junks my VW Fox PDQ
GothamCond-Light	Gotham Condensed	lc	n	xgcl8rc	The glib czar junks my VW Fox PDQ
GothamCond-Light	Gotham Condensed	lc	sc	xgclc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-LightItalic	Gotham Condensed	lc	it	xgcli8rc	The glib czar junks my VW Fox PDQ
GothamCond-XLight	Gotham Condensed	jc	n	xgcj8rc	The glib czar junks my VW Fox PDQ
GothamCond-XLight	Gotham Condensed	jc	sc	xgcjc8rc	THE GLIB CZAR JUNKS MY VW FOX PDQ
GothamCond-XLightItalic	Gotham Condensed	jc	it	xgcji8rc	The glib czar junks my VW Fox PDQ

Series

mc	Medium, Condensed/Cond
kc	Book, Condensed/Cond
bc	Bold, Condensed/Cond
cc	Black, Condensed/Cond
uc	Ultra/UltraBlack, Condensed/Cond
xc	ExtraBold/ExtraBlack, Condensed/Cond
ac	Thin/Hairline, Condensed/Cond
lc	Light, Condensed/Cond
jc	ExtraLight, Condensed/Cond

Shape

n	Normal
it	Italic
sl	Slanted
sc	Small Caps

Figure 1: One of the faces in the Gotham family from Hoefler & Frère-Jones

the heading, because you can set the relevant argument of `\@startsection` to 1sp (it cannot be zero or negative because that is used to specify run-in headings). But when the layout requires a non-zero paragraph space, done in this case with the parskip package, that amount gets added by the `\par` after a heading. One solution — a kludge — is to add an embedded negative skip at the end of the heading text, which would drag the following paragraph up; and then to add code to `\@dottedtocline` so that the negative skip in the heading did not affect the Table of Contents. Running heads would not normally occur at the subsection level, otherwise the same method would have been needed there.

4 Business cards

I haven't used very many of these but I do have a few for meetings with people who need them. Some cultures use them more than others: I am told they are *de rigueur* in Japan and virtually non-existent in Silicon Valley. Graduate students don't immediately spring to mind as a market, but in fact they're rather important. These are people who meet funding agencies, attend conferences where they need to get their name and their institution known, and do business with authors and publishers who may need reminding of the person and the field.

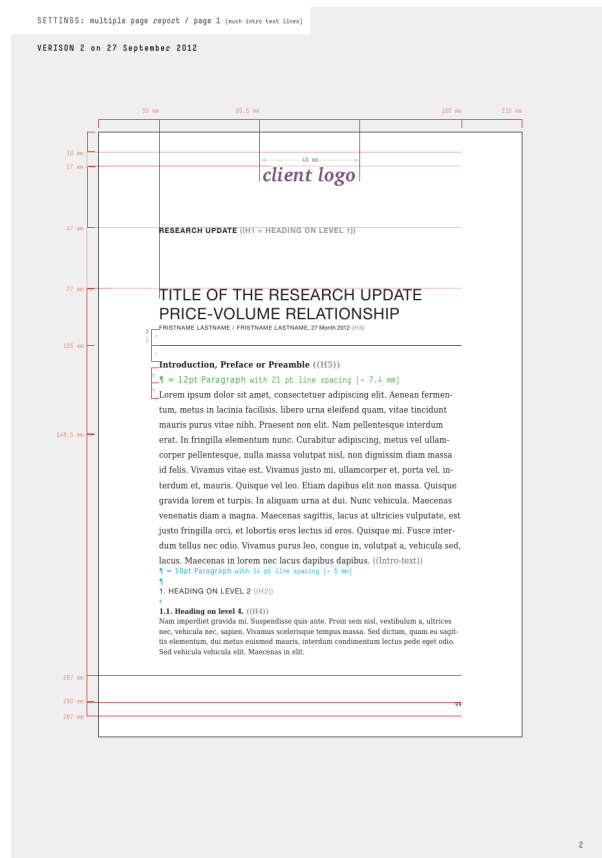But they're far too expensive for a department to have them professionally printed for every student,

5   Running ragged

Ragged-right setting is commonplace for many applications, often on æsthetic grounds because the column width is narrow, or because the line-spacing is tight, or because the document is informal (and probably lots of other reasons, too). One place where it has a specific practical use is in bibliographies, and yet I constantly see the References in articles and longer documents set justified because that's the default. You can be lucky: if all the names and words in your entries are short, the H&J engine won't have any problem, even in narrow columns [2].

However, the majority of technical documents with references would seem naturally to involve specialist words and phrases that even TEX's hyphenation algorithm may not handle, or long URIs that don't linebreak easily [1]. In this case, as below, you may get the author and title justified, but have trouble with very long URIs. I see no reason why bibliographies shouldn't be set ragged-right, especially where the measure is narrow: it certainly looks better than having a mix of justified and ragged. (Bibliographies in *TUGboat* often use ragged-right for precisely these reasons; the present bibliography is left as the default for purposes of example.)

References

[1] Fethi Calisir and Zafer Gurel. Influence of text structure and prior knowledge of the learner on reading comprehension, browsing and perceived control. *Computers in Human Behavior*, 19(2):135–145, Mar 2003. Retrieved October 11, 2012, from `http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VDC-47RRDVM-2&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=8a60db5132b2b1781bd2fefc1d0d1970`.

[2] Tobias Oetiker, Hubert Partl, Irena Hyna, and Elisabeth Schlegl. The Not So Short Introduction to LATEX 2_ε. Technical report, TEX Users Group, Apr 2011. Retrieved October 11, 2012, from `http://www.ctan.org/tex-archive/info/lshort/english/`.

⋄ Peter Flynn
  Textual Therapy Division, Silmaril
    Consultants
  Cork, Ireland
  Phone: +353 86 824 5333
  `peter (at) silmaril dot ie`
  `http://blogs.silmaril.ie/peter`

Figure 2: Conventional grid-based layout showing drop-measurement from the page-top; fixed-height vertical spacing using multiples of the baseline; and second-level headings set solid with the following text. [Reproduced with permission.]

and leaving it to the individual to fake one up is not going to give a good impression. Hence I have been asked to develop a personalized web-based system to typeset them (using LATEX, of course) at 10 per page so they can be printed on any decent office colour printer on any pull-apart microperforated stock.

So far, so good: nothing special. But what came up is that designers working for universities don't get sufficient information from the institution, and they seem unable to imagine sufficient use cases themselves. The result is layouts which provide far too little space for the essentials: name, department or project, institution, email address, and URI. How they expect all the material to fit in a 2cm column on the right-hand end of a card is beyond me, and if you then add the requirement for a QR code of your ORCID or other coordinate in cyberspace, you just run out of physical space.

The trick, of course, is just to redesign them. . .

Peter Flynn