
Typographers' Inn

Peter Flynn

The usability of digital typography

I have been asked to contribute to some research on this topic, so I have been trying to identify what there is, if anything, in specifically *digital* typography for which the usability factors are not already present in non-digital typography (hand-set type, hot-metal, analog film, etc.).

The traditional view of most typographic design is that it should keep out of the way and be invisible; anything which comes between reader and message should assist the passage of information, not hinder it. The moment the reader starts admiring the layout or the typeface instead of reading the text is the moment you have failed to convey the author's message. Present company excepted, of course. Adrian Frutiger (whose recent death is remembered on p. 182 f.) once said, 'The whole point with type is for you not to be aware it is there. If you remember the shape of a spoon with which you just ate some soup, then the spoon had a poor shape.' [1]

I have summarized what appear to be five main areas here, and I would be very interested to know if they correspond with the feelings of other T_EX users.

Design Digital typography (well, pretty much *all* typography nowadays, apart from the metal type community) allows greater positional freedom than is possible in metal, so any measure of usability needs to consider the effects of this in design and layout. We also need to remember that Letraset (rub-down lettering) allowed much of the same freedom, and that largely preceded the switch to digital methods.

Typefaces The availability of typefaces has changed as well, so the choices are expanding on two fronts: faces that were no longer available are being digitized for modern use; and easy access to typeface design software by anyone with a computer has led to an explosion of new fonts, not all of them necessarily very usable. Within fonts, previously inaccessible or hard-to-obtain characters are now more widely available.

Users' experiences of fonts The level of user experience (UX) of software that uses fonts is now extensive. It started with word-processing, when a 'digital font' was just a dot-pattern for a nine-nozzle ink-jet printer or a removable typehead on a daisy-wheel printer. Now, virtually every application has configurable fonts, both for its own interface and for the output it produces,

and users have become accustomed to this flexibility and have come to expect it.

Workflow The production workflow has changed, both at the editorial and the design and composition stages, with the digital file being re-used between edit cycles instead of having to be re-keyed, or the (metal) type having to be kept standing. Changes are more easily made, both to the copy and the layout.

Flexibility Finally, there has been a shift in the degree to which additional features can be added. A book can become a web site, and a web site can be reformatted as a book (or ebook); and an article can be reproduced in many different guises, with the text staying unaltered, but the design and layout changing dramatically. Links can be revealed or hidden, although we still can't yet click on paper.

This may all sound like pie in the sky, as we still labor under the burden of evil file formats, incompatible equipment, or heavy-handed corporate or personal predilections. But I would hope that what we do, especially with T_EX, and the way that we do it, makes the documents we produce usable for our readers. There are regulatory issues, too, such as the font requirements for pharmaceutical labelling information, and signage of various kinds.

There has been a recent discussion, on a professional usability mailing list, about research into performance increases related to 'information hierarchies'. I initially assumed this meant document structuring (chapter/section/subsection), but the term actually referred to font changes which imply degrees of importance (headings, emphasis, etc.). The discussion turned on studies which have found that certain typographical treatments may actually confuse readers and lead to lower comprehension. More on this another time.

If you have experienced usability changes as a result of typography, please let me know.

Hierarchy and balance

On a similar note, I have been implementing several document classes for technical documentation. These are mostly for clients' internal use, but some are for white papers, the articles published by R&D departments highlighting such findings as they can safely release without damaging their competitive edge.

They need to reflect the corporate identity, of course, which can be anything from non-existent to extremely complex, but they also need to be slightly different from the rest of the organization's documents, as they will get exposure to a different set of people from most other documents. In most cases

the layout is specified by a designer, and it has been interesting to compare the styles.

There are usually three layers to an information hierarchy when instantiated typographically: major, minor, and body. The major level is usually for the titling, the minor for labelling the components which make up the body, and the body for the normal text. The boundaries sometimes blur: the face used for the minor level might also be used at subtitle level, but in general they are kept apart.

Figure 1 shows an example of this kind of design (adapted and anonymized from the originals).



Figure 1: Example of typographic hierarchy

The major and minor level (unusually) both use *Raleway*, which happens to be the corporate name-style, with the oddity that they always put the ‘Inc’ italicized in the body serif face. The title, subtitle, and date are in *Raleway Bold*.

The minor level headings (all the sectioning) are in *Raleway Regular*, as is the identity block at top right, except the corporate tagline is bold.

The body is in *Warnock*, spaced widely, with a larger size spaced even more widely for the summary. The side-notes, however, are in *Raleway*, to distinguish them more clearly from the body copy, as there is no rule between the columns.

The strong vertical stress given by the separation of the page into two unequal columns (text and wide margin), is balanced between the banner (the identity block), the title (for the date), and the body. Keeping the sans face for this right-hand material helps make it clear that it is distinct from the body.

I think they get away with it here, as the sans is the same face as the corporate name-style, and their globe logo is non-typographic. The two oddities (the italicized *Inc* and the page number centered in the right-hand column) are ‘features’ taken from the corporate style of the same company used in other areas.

Implementing this kind of layout in \LaTeX requires a wide right-hand margin specified with the `geometry` package, and a `\maketitle` able to use it. The remainder of the document largely follows standard article conventions.

Afterthought

Lots of people seem to want to use \TeX on their Android devices, which I mentioned in an earlier column; and lots of people also use Emacs for \TeX . A version of Emacs for Android put out some years ago failed on a broken terminal application, and no longer works because of Android’s new position-independent executable requirements.

David Megginson, whom some of you may know from his XML activities, has fixed this, recompiled the binary, and made it available on GitHub with instructions at <http://quoderat.megginson.com/2015/05/26/update-running-emacs-in-android-1-lollipop>.

I installed this on my Galaxy Note 4 during the XML Summer School recently, much to the amusement of my non-Emacs-using colleagues, and it seems to work just fine. I haven’t managed to bind it to a \TeX executable yet, as I don’t know if the one that comes with the \LaTeX Editor app is accessible, but watch this space.

References

- [1] Monotype GmbH. *Typography as the highest form of visual communication: A talk with Adrian Frutiger*. *Linotype Font Feature*, July 2014. <http://www.linotype.com/de/2316/portrait.html>.

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