
ConT_EXt basics for users: Font styles

Aditya Mahajan

Abstract

This article presents a summary of different ways of changing font styles in ConT_EXt.

1 Introduction

The *TUGboat* editors recently invited me to write a regular column in *TUGboat* explaining some of the basic features of ConT_EXt. This column is meant for ConT_EXt beginners, and will explain how basic elements of ConT_EXt work. I will explain it from the practicable point of view, that is, do this, and you will get this; to understand what is happening behind the scenes you need to read the ConT_EXt manuals¹ and the ConT_EXt sources.²

In this first installment, I will discuss how to use the various font styles in ConT_EXt. Fonts are one of the most complicated parts of T_EX. Fortunately, the macro developers take care of the dirty stuff, and most of the user interface is clean. Nevertheless, understanding the various options of the user interface can be intimidating. As a beginner, one does not want to know all the nitty-gritty details, but just the basic features. We hope to present these in this article.

In ConT_EXt there are five ways to switch fonts:

1. font style (`\rm`, `\ss`, etc.),
2. font size (`\tfa`, `\tfb`, etc.),
3. alternative font style (`\bold`, `\sans`, etc.),
4. a complete font change (`\setupbodyfont`, `\switchtobodyfont`).

I will briefly explain each of these.

2 Font styles

There are three types of font families: serif, sans serif, and teletype. To switch between these families, use `\rm` for serif, `\ss` for sans serif, and `\tt` for teletype.

Each of these families come in different styles: upright, bold, italic, slanted, bold-italic, bold-slanted, and small caps. To switch to a different style, use `\tf` for upright, `\bf` for bold, `\it` for italic, `\sl` for slanted, `\bi` for bold-italic, `\bs` for bold-slanted, and `\sc` for small-capped.

You can generally combine font families and font styles, so if you want to switch to bold sans serif, you can use either `\bf\ss` or `\ss\bf`.

There is a font switch `\em` to *emphasize* text.

This is somewhat special: it does automatic italic correction and changes the style depending on the current font style. For example, if the current font style is upright, `\em` switches to slanted; and if the current font style is slanted, `\em` switches to upright.

ConT_EXt uses the Latin Modern fonts by default; these fonts look similar to the original Computer Modern fonts, but have a much larger character repertoire. As it happens, in the Latin Modern (and Computer Modern) fonts, the *slanted* font does not stand out from the upright font enough for some tastes; so, many people prefer to use the *italic* font for emphasis. To do that use

```
\definebodyfontenvironment[default][em=italic]
```

A font switch remains valid for the rest of the group. So, if you want to temporarily switch to a different font, use the font style command inside a group. The easiest way to start a group is to enclose the text within braces (also called curly brackets), for example

```
This is serif text
{\ss This is sans serif}
{\tt and this is typewriter}
```

which gives (notice the braces in the above lines)

```
This is serif text
This is sans serif
and this is typewriter
```

3 Font sizes

Occasionally one needs to change the font size. ConT_EXt provides two series of commands for that. To increase the font you can use `\tfa` to scale the font size by a factor of 1.2, `\tfb` to scale by a factor of $(1.2)^2 = 1.44$, `\tfc` to scale by $(1.2)^3 = 1.728$ and `\tfd` to scale by $(1.2)^4 = 2.074$.

To decrease the font size, you can use `\tfx` to scale the font by a factor of 0.8 and `\tfxx` to scale by a factor of 0.6. The scale factors can be a function of the current font size and can be changed by `\definebodyfontenvironment`.

For example, if you want `\tfa` to be equal to 12pt when you are using 10pt font, and be equal to 14pt when you are using 11pt font, then add

```
\definebodyfontenvironment [10pt] [a=12pt]
\definebodyfontenvironment [11pt] [a=14pt]
```

The `\definebodyfontenvironment` command is de-

¹ <http://pragma-ade.com/show-man-1.htm>

² <http://www.logosrl.it/context/modules/>

scribed in detail in the ConTeXt manual and the `font-ini.tex` source file.

Font size can be combined with font styles. As a shortcut, you can use `\bfa` to get bold font scaled by 1.2, `\bfx` to get a bold font scaled by 0.8 and similar commands for other font styles.

These font size switches are meant for changing the font size of a few words: they do not change the interline spacing and math font sizes. So, if you want to change the font size of an entire paragraph, use `\switchtobodyfont` described below in Section 5. However, it is fine to use them as style directives in setup commands, that is, using them as an option for `style=...` in any setup command that accepts the `style` option.

4 Alternative font styles

While learning a document markup language like ConTeXt, it can be hard to remember all the commands. ConTeXt provides easy to remember alternative font styles. So for bold you can use `\bold`, for italic you can use `\italic`, for slanted you can use `\slanted`, and so on. You can probably guess what the following do:

<code>\normal</code>	<code>\slanted</code>
<code>\boldslanted</code>	<code>\slantedbold</code>
<code>\bolditalic</code>	<code>\italicbold</code>
<code>\small</code>	<code>\smallnormal</code>
<code>\smallbold</code>	<code>\smallslanted</code>
<code>\smallboldslanted</code>	<code>\smallslantedbold</code>
<code>\smallbolditalic</code>	<code>\smallitalicbold</code>
<code>\sans</code>	<code>\sansserif</code>
<code>\sansbold</code>	<code>\smallcaps</code>

In addition, the commands `\smallbodyfont` and `\bigbodyfont` can be used to change the font size.

These alternative font styles are pretty smart. You can either use them as font style switches inside a group, or as a font changing command that takes an argument. For example,

This is `{\bold bold}` and so is `\bold{this}`.

gives

This is **bold** and so is **this**.

These alternative font styles can also be used for all `style=...` options, and while using them as style options, you can just give the command name, for example:

```
\setuphead[section][style=bold]
```

5 Complete font change

If you need to change to a different font size and take care of interline spacing, you can use `\switchtobodyfont`. For example, to switch to 12pt you can use `\switchtobodyfont[12pt]`.

ConTeXt provides two relative sizes, called ‘big’ and ‘small’. So, to go to a bigger font size, you can use `\switchtobodyfont[big]` and to go to a smaller font size, `\switchtobodyfont[small]`. The exact sizes that are used for big and small can be set using `\definebodyfontenvironment`.

The `\setupbodyfont` command accepts all the same arguments as `\switchtobodyfont`. The difference between the two is that `\setupbodyfont` also changes the font for headers, footers and other page markings, while `\switchtobodyfont` does not. So you should use `\setupbodyfont` for global font definitions to apply to the whole document, and `\switchtobodyfont` for local font changes. The effect of `\switchtobodyfont` can be localized within a group as usual.

6 Different typefaces

So far we have discussed style and size changes within a given typeface family. If you want to use a different typeface altogether, such as Times or Palatino, the Pragma web site has recipes covering all the commonly available typefaces,³ while a separate manual describes how to write support for new typefaces.⁴ (For the latter, see also Idris Hamid’s article in this issue of *TUGboat*.)

The recipes as given work with the standalone ConTeXt distribution, but not with TeX Live et al.⁵ To use the recipes with other distributions, try adding one of `\usetypescript[berry][ec]` or `\usetypescript[adobekb][ec]`.

7 Conclusion

There are many other ways of choosing font styles in ConTeXt. If these basic styles do not satisfy your needs, have a look at the manual, or ask on the ConTeXt mailing list.⁶

◇ Aditya Mahajan
University of Michigan
adityam (at) umich dot edu

³ <http://pragma-ade.com/general/manuals/showfont.pdf>

⁴ <http://pragma-ade.com/general/manuals/mfonts.pdf>

⁵ <http://pragma-ade.com/general/technotes/tfmetrics.pdf> explains why ConTeXt uses separate font metrics, and gives some differences between the sets.

⁶ http://wiki.contextgarden.net/ConTeXt_Mailing_Lists