The Fetamont Package

Linus Romer

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1 Introduction

The logo font, known from logos like METAFONT or METAPOST, has been very limited in its collection of glyphs. The new typeface *Fetamont* extends the logo typeface in two ways:

- Fetamont consists of 256+ glyphs, such that the T1 (a.k.a. EC, a.k.a. Cork) encoding table is complete now.
- Fetamont has additional faces like “light ultracondensed” or “script”.

The `fetamont` package provides LaTeX support for the Fetamont typeface. Both the package and the typeface are distributed on CTAN under the terms of the *LaTeX Project Public License* (LPPL).

This document describes the LaTeX support for the Fetamont typeface. The design and the constructions of the typeface itself are described in [Romer17].

The OpenType versions of the script faces support the Randomize feature, which can be used with LuaTeX. It is *not* possible to use this feature with the package described here.

2 Usage

The package is loaded by `\usepackage{fetamont}`. There are no options provided yet for the `fetamont` package.

If you use the `fetamont` package as a replacement for the `mflogo` package you will probably only need the control sequences `\MF`, `\MP` and `\MT` which produce the well known logos METAFONT, METAPOST and METATYPE1.

When you need other words written in the Fetamont typeface, you may use `\textffm` and `\textffmw`. E. g. `\textffm{My Logo}` will produce My Logo and `\textffmw{Script}` will produce Script.

To gain access to all faces of Fetamont you may sometimes additionally need `\ffmfamily` or `\ffmwfamily` (see subsection 3.6).

3 The many faces of Fetamont

3.1 Bold and heavy faces

The bold face of the original logo font family clearly fits better with *Computer Modern Sans Bold*, whereas the demibold face is the better choice for a combination with *Computer Modern Extended Bold*:

META Serif
Sans META

Ulrik Vieth has already mentioned this unsatisfactory situation in [Vieth99]. He has assumed that *Computer Modern Roman* will be used in boldface series much more frequently than *Computer Modern Sans Serif*. So he assigned the demibold faces to the bold series in his `mflogo` package (see [Vieth99]).

In order to be compatible to Ulrik Vieths assignment I have chosen the following naming scheme for weights:

original name	Fetamont name	symbol
–	light	l
medium	medium	r
demibold	bold	b
bold	heavy	h

3.2 Script faces

The "crazy shapes" by D. E. Knuth show impressively the randomization power of METAFONT. The Fetamont typeface has also the ability to use randomized paths. The results are the Fetamont script faces. They are drawn by a rotated ellipse pen to make it look more handwritten. The script faces may be used for comics or childish texts:

¿Donde? --- ¡Aqui!

3.3 Condensed Faces

The titles in Knuth's books use a variant of the logo typeface that matches *Computer Modern Sans Serif Demibold Condensed 40*. So I decided to add this variant as *Fetamont Bold Condensed 40* and let also a light and medium variant benefit from the condensation.

Light Condensed 10

Medium Condensed 10

BoldCondensed40

3.4 Ultracondensed Face

The credits written on movie posters are often typeset in an ultracondensed face. Also fetamont provides such a face:

Light Ultracondensed 10

3.5 Naming Scheme For The Fetamont Faces

The file name of every face begins with the prefix `ffm`, which stands for «*f*ree typeface *f*eta*m*ont». The suffixes normally contain a symbol for the weight: `l` for light, `r` for regular, `b` for bold and `h` for heavy. The number at the end stands for the optical size (e. g. 10 pt). Depending on the face, the suffix is made of additional symbols:

Upright				Oblique			
	r8	b8	h8		o8	bo8	ho8
	r9	b9	h9		o9	bo9	ho9
l10	r10	b10	h10	lo10	o10	bo10	ho10
Condensed Upright				Condensed Oblique			
lc10	c10			lco10	co10		
		bc40				bco40	
Ultracondensed Upright				Ultracondensed Oblique			
lq10				lqo10			
Script Upright				Script Oblique			
lw10	w10	bw10	hw10	lwo10	wo10	bwo10	hwo10

3.6 NFSS–Access To All Faces

The following tabular shows the NFSS–access for every Fetamont face.

MF-name	low level access	sample
ffml10	\ffmfamily\fontseries{l} \selectfont	GAUß
ffmr10, ffmr9, ffmr8	\ffmfamily\fontseries{m} \selectfont	GAUß GAUß GAUß
ffmb10, ffmb9, ffmb8	\ffmfamily\fontseries{b} \selectfont	**GAUß GAUß GAUß**
ffmh10, ffmh9, ffmh8	\ffmfamily\fontseries{eb} \selectfont	**GAUß GAUß GAUß**
ffmlo10	\ffmfamily\fontseries{l} \slshape	*GAUß*
ffmo10, ffmo9, ffmo8	\ffmfamily\fontseries{m} \slshape	*GAUß GAUß GAUß*
ffmbo10, ffmbo9, ffmbo8	\ffmfamily\fontseries{b} \slshape	***GAUß GAUß GAUß***
ffmho10, ffmho9, ffmho8	\ffmfamily\fontseries{eb} \slshape	***GAUß GAUß GAUß***
ffmlc10	\ffmfamily\fontseries{lc} \selectfont	GAUß
ffmc10	\ffmfamily\fontseries{c} \selectfont	GAUß
ffmbc40	\ffmfamily\fontseries{bc} \selectfont	**GAUß**
ffmlco10	\ffmfamily\fontseries{lc} \slshape	*GAUß*
ffmco10	\ffmfamily\fontseries{c} \slshape	*GAUß*
ffmbco40	\ffmfamily\fontseries{bc} \slshape	***GAUß***
ffmlq10	\ffmfamily\fontseries{lec} \selectfont	GAUß
ffmlqo10	\ffmfamily\fontseries{lec} \slshape	*GAUß*
ffmlw10	\ffmwfamily\fontseries{l} \selectfont	GAUß
ffmw10	\ffmwfamily\fontseries{m} \selectfont	GAUß
ffmbw10	\ffmwfamily\fontseries{b} \selectfont	**GAUß**
ffmhw10	\ffmwfamily\fontseries{eb} \selectfont	**GAUß**
ffmlwo10	\ffmwfamily\fontseries{l} \slshape	*GAUß*
ffmwo10	\ffmwfamily\fontseries{m} \slshape	*GAUß*
ffmbwo10	\ffmwfamily\fontseries{b} \slshape	***GAUß***
ffmhwo10	\ffmwfamily\fontseries{eb} \slshape	***GAUß***

4 Package Implementation

4.1 The font definition files

As the *T1* encoding is used for the *f*ree typeface *f*eta*m*ont, the font definition file is named `T1ffm.fd`. This is the default font family of Fetamont. Additionally, there is also a script font family (`T1ffmw.fd`).

The italic faces are always silently substituted by oblique faces.

⟨∗T1ffm⟩

```
\DeclareFontFamily{T1}{ffm}{}
```

Light faces:

```
\DeclareFontShape{T1}{ffm}{l}{n}{<-> ffml10}{}
\DeclareFontShape{T1}{ffm}{l}{sl}{<-> ffmlo10}{}
\DeclareFontShape{T1}{ffm}{l}{it}{<-> ssub * ffm/l/sl}{}
```

Regular/medium faces (three different optical sizes):

```
\DeclareFontShape{T1}{ffm}{m}{n}{
  <-8> ffmr8
  <9> ffmr9
```

```
  <10-> ffmr10
}{}
\DeclareFontShape{T1}{ffm}{m}{sl}{
  <-8> ffmo8
  <9> ffmo9
  <10-> ffmo10
}{}
\DeclareFontShape{T1}{ffm}{m}{it}{
  <-> ssub * ffm/m/sl
}{}
```

Bold faces (three different optical sizes, bold extended faces are silently substituted):

```
\DeclareFontShape{T1}{ffm}{b}{n}{
  <-8> ffmb8
  <9> ffmb9
  <10-> ffmb10
}{}
\DeclareFontShape{T1}{ffm}{b}{sl}{
  <-8> ffmbo8
  <9> ffmbo9
  <10-> ffmbo10
}{}
\DeclareFontShape{T1}{ffm}{b}{it}{
  <-> ssub * ffm/b/sl
}{}
\DeclareFontShape{T1}{ffm}{bx}{n}{
  <-> ssub * ffm/b/n
}{}
\DeclareFontShape{T1}{ffm}{bx}{sl}{
  <-> ssub * ffm/b/sl
}{}
\DeclareFontShape{T1}{ffm}{bx}{it}{
  <-> ssub * ffm/b/sl
}{}
```

Heavy/extra bold faces (three different optical sizes):

```
\DeclareFontShape{T1}{ffm}{eb}{n}{
  <-8> ffmh8
  <9> ffmh9
  <10-> ffmh10
}{}
\DeclareFontShape{T1}{ffm}{eb}{sl}{
  <-8> ffmho8
  <9> ffmho9
  <10-> ffmho10
}{}
\DeclareFontShape{T1}{ffm}{eb}{it}{
  <-> ssub * ffm/h/sl
}{}
```

Light condensed faces:

```
\DeclareFontShape{T1}{ffm}{lc}{n}{<-> ffmlc10}{}
\DeclareFontShape{T1}{ffm}{lc}{sl}{<-> ffmlco10}{}
\DeclareFontShape{T1}{ffm}{lc}{it}{<-> ssub * ffm/lc/sl}{}
```

Condensed faces:

```
\DeclareFontShape{T1}{ffm}{c}{n}{<-> ffmc10}{}
\DeclareFontShape{T1}{ffm}{c}{sl}{<-> ffmco10}{}
\DeclareFontShape{T1}{ffm}{c}{it}{<-> ssub * ffm/c/sl}{}
```

Bold condensed faces:

```
\DeclareFontShape{T1}{ffm}{bc}{n}{<-> ffmbc40}{}
\DeclareFontShape{T1}{ffm}{bc}{sl}{<-> ffmbco40}{}
\DeclareFontShape{T1}{ffm}{bc}{it}{<-> ssub * ffm/bc/sl}{}
```

Light ultra condensed faces:

```
\DeclareFontShape{T1}{ffm}{lec}{n}{<-> ffmlq10}{}
\DeclareFontShape{T1}{ffm}{lec}{sl}{<-> ffmlqo10}{}
\DeclareFontShape{T1}{ffm}{lec}{it}{<-> ssub * ffm/lec/sl}{}
```

⟨/T1ffm⟩

The script faces need an own family for a proper NFSS–access:

⟨∗T1ffmw⟩

```
\DeclareFontFamily{T1}{ffmw}{}
```

Light faces:

```
\DeclareFontShape{T1}{ffmw}{l}{n}{<-> ffmlw10}{}
\DeclareFontShape{T1}{ffmw}{l}{sl}{<-> ffmlwo10}{}
\DeclareFontShape{T1}{ffmw}{l}{it}{<-> ssub * ffmw/l/sl}{}
```

Medium/regular faces:

```
\DeclareFontShape{T1}{ffmw}{m}{n}{
  <-> ffmw10
}{}
\DeclareFontShape{T1}{ffmw}{m}{sl}{
  <-> ffmwo10
}{}
\DeclareFontShape{T1}{ffmw}{m}{it}{
  <-> ssub * ffmw/m/sl
}{}
```

Bold faces (bold extended faces are silently substituted):

```
\DeclareFontShape{T1}{ffmw}{b}{n}{
  <-> ffmbw10
}{}
\DeclareFontShape{T1}{ffmw}{b}{sl}{
  <-> ffmbwo10
}{}
\DeclareFontShape{T1}{ffmw}{b}{it}{
  <-> ssub * ffmw/b/sl
```

```
}{}
\DeclareFontShape{T1}{ffmw}{bx}{n}{
  <-> ssub * ffmw/b/n
}{}
\DeclareFontShape{T1}{ffmw}{bx}{sl}{
  <-> ssub * ffmw/b/sl
}{}
\DeclareFontShape{T1}{ffmw}{bx}{it}{
  <-> ssub * ffmw/b/sl
}{}
```

Heavy/extra bold faces (three different optical sizes):

```
\DeclareFontShape{T1}{ffmw}{eb}{n}{
  <-> ffmhw10
}{}
\DeclareFontShape{T1}{ffmw}{eb}{sl}{
  <-> ffmhwo10
}{}
\DeclareFontShape{T1}{ffmw}{eb}{it}{
  <-> ssub * ffmw/h/sl
}{}
```

⟨/T1ffmw⟩

4.2 The style file: `fetamont.sty`

The following macros are adapted from the `mflogo` package by [Vieth99].

`\ffmfamily` This is the declarative font changing command for the "normal" font family.

```
⟨*package⟩
\DeclareRobustCommand\ffmfamily{%
  \not@math@alphabet\ffmfamily\relax
  \fontencoding{T1}\fontfamily{ffm}\selectfont}
```

`\ffmwfamily` This is the declarative font changing command for the script font family.

```
\DeclareRobustCommand\ffmwfamily{%
  \not@math@alphabet\ffmwfamily\relax
  \fontencoding{T1}\fontfamily{ffmw}\selectfont}
```

`\textffm` This is basically the same as `\ffmfamily` but takes one argument.

```
\DeclareTextFontCommand{\textffm}{\ffmfamily}
```

`\textffmw` This is basically the same as `\ffmwfamily` but takes one argument.

```
\DeclareTextFontCommand{\textffmw}{\ffmwfamily}
```

`\MF` `\MP` `\MT` These are the definitions of the METAFONT, METAPOST and METATYPE1 logos.

```
\def\MF{\textffm{META}\@dischyph\textffm{FONT}\@}
\def\MP{\textffm{META}\@dischyph\textffm{POST}\@}
\def\MT{\textffm{META}\@dischyph\textffm{TYPE1}\@}
⟨/package⟩
```

Change History

References

[Romer17] Linus Romer. *The Fetamont Typeface*. 2017

[Vieth99] Ulrik Vieth. *The `mflogo` package*. `mirrors.ctan.org/macros/latex/contrib/mflogo/mflogo.pdf`, 1999