

The Fetamont Package

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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 L^AT_EX support for the Fetamont typeface. Both the package and the typeface are distributed on CTAN under the terms of the L^AT_EX Project Public License (LPPL).

This document describes the L^AT_EX 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 LuaT_EX. 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 `\fffamily` 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 childlike 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 «free typeface *fetamont*». 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 bc40	lco10 co10 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	GAUB
ffmr10, ffmr9, ffmr8	\ffmfamily\fontseries{m} \selectfont	GAUB GAUB GAUB
ffmb10, ffmb9, ffmb8	\ffmfamily\fontseries{b} \selectfont	GAUB GAUB GAUB
ffmh10, ffmh9, ffmh8	\ffmfamily\fontseries{eb} \selectfont	GAUB GAUB GAUB
ffmlo10	\ffmfamily\fontseries{l} \slshape	GAUB
ffmo10, ffmo9, ffmo8	\ffmfamily\fontseries{m} \slshape	GAUB GAUB GAUB
ffmbo10, ffmbo9, ffmbo8	\ffmfamily\fontseries{b} \slshape	GAUB GAUB GAUB
ffmho10, ffmho9, ffmho8	\ffmfamily\fontseries{eb} \slshape	GAUB GAUB GAUB
ffmlc10	\ffmfamily\fontseries{lc} \selectfont	GAUB
ffmc10	\ffmfamily\fontseries{c} \selectfont	GAUB
ffmbc40	\ffmfamily\fontseries{bc} \selectfont	GAUB
ffmlco10	\ffmfamily\fontseries{lc} \slshape	GAUB
ffmco10	\ffmfamily\fontseries{c} \slshape	GAUB
ffmbco40	\ffmfamily\fontseries{bc} \slshape	GAUB
ffmlq10	\ffmfamily\fontseries{lec} \selectfont	GAUB
ffmlqo10	\ffmfamily\fontseries{lec} \slshape	GAUB
ffmlw10	\ffmwfamily\fontseries{l} \selectfont	GAUB
ffmw10	\ffmwfamily\fontseries{m} \selectfont	GAUB
ffmbw10	\ffmwfamily\fontseries{b} \selectfont	GAUB
ffmhw10	\ffmwfamily\fontseries{eb} \selectfont	GAUB
ffmlwo10	\ffmwfamily\fontseries{l} \slshape	GAUB
ffmwo10	\ffmwfamily\fontseries{m} \slshape	GAUB
ffmbwo10	\ffmwfamily\fontseries{b} \slshape	GAUB
ffmhwo10	\ffmwfamily\fontseries{eb} \slshape	GAUB

4 Package Implementation

4.1 The font definition files

As the *T1* encoding is used for the free typeface *fetamont*, 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}{s1}{<-> ffmlo10}{}%
\DeclareFontShape{T1}{ffm}{l}{it}{<-> ssub * ffn/1/s1}{}%
```

Regular/medium faces (three different optical sizes):

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

```

<10-> ffmr10
}{}
\DeclareFontShape{T1}{ffm}{m}{s1}{
  <-8> ffmo8
  <9> ffmo9
  <10-> ffmo10
}{}
\DeclareFontShape{T1}{ffm}{m}{it}{
  <-> ssub * ffm/m/s1
}{}

```

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}{s1}{

  <-8> ffmbo8
  <9> ffmbo9
  <10-> ffmbo10
}{}
\DeclareFontShape{T1}{ffm}{b}{it}{

  <-> ssub * ffm/b/s1
}{}
\DeclareFontShape{T1}{ffm}{bx}{n}{

  <-> ssub * ffm/b/n
}{}
\DeclareFontShape{T1}{ffm}{bx}{s1}{

  <-> ssub * ffm/b/s1
}{}
\DeclareFontShape{T1}{ffm}{bx}{it}{

  <-> ssub * ffm/b/s1
}{}

```

Heavy/extrabold faces (three different optical sizes):

```

\DeclareFontShape{T1}{ffm}{eb}{n}{

  <-8> ffmh8
  <9> ffmh9
  <10-> ffmh10
}{}
\DeclareFontShape{T1}{ffm}{eb}{s1}{

  <-8> ffmho8
  <9> ffmho9
  <10-> ffmho10
}{}
\DeclareFontShape{T1}{ffm}{eb}{it}{

  <-> ssub * ffm/h/s1
}{}

```

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 * ffw/l/sl}{}
```

Medium/regular faces:

```
\DeclareFontShape{T1}{ffmw}{m}{n}{<-> ffw10}{}
\{\}
\DeclareFontShape{T1}{ffmw}{m}{sl}{<-> ffw010}{}
\{\}
\DeclareFontShape{T1}{ffmw}{m}{it}{<-> ssub * ffw/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 * ffw/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.
 $\langle *package \rangle$
 $\backslash\text{DeclarerobustCommand}\{ffmfamily\}$
 $\backslash\not@math@\alpha lphabet\{ffmfamily\}$
 $\backslash\text{relax}$
 $\backslash\text{fontencoding}\{T1\}$
 $\backslash\text{fontfamily}\{ffm\}$
 $\backslash\text{selectfont}$
- \ffmwfamiliy This is the declarative font changing command for the script font family.
 $\backslash\text{DeclarerobustCommand}\{ffmwfamiliy\}$
 $\backslash\not@math@\alpha lphabet\{ffmwfamiliy\}$
 $\backslash\text{relax}$
 $\backslash\text{fontencoding}\{T1\}$
 $\backslash\text{fontfamily}\{ffmw\}$
 $\backslash\text{selectfont}$
- \textffm This is basically the same as \ffmfamily but takes one argument.
 $\backslash\text{DeclarertextFontCommand}\{\textffm\}$
 $\backslash\text{ffmfamily}$
- \textffmw This is basically the same as \ffmwfamiliy but takes one argument.
 $\backslash\text{DeclarertextFontCommand}\{\textffmw\}$
 $\backslash\text{ffmwfamiliy}$
- \MF These are the definitions of the METAFONT, METAPOST and METATYPE1 logos.
 $\backslash\text{def}\{MF\}\{\textffm\{META\}\}$
 $\backslash\text{dischyp}\{textffm\{FON\}\}$
 $\backslash\text{def}\{MP\}\{\textffm\{META\}\}$
 $\backslash\text{dischyp}\{textffm\{POST\}\}$
 $\backslash\text{def}\{MT\}\{\textffm\{META\}\}$
 $\backslash\text{dischyp}\{textffm\{TYPE1\}\}$
 $\langle /package \rangle$

Change History

1.0	General: initial version	1	
1.1	General: changed the filename ffmchar_ij.mf to ffmchar_ijlower.mf	1	1.6 some digits, added additional kernings, mainly between letters and numbers; changed the shape of the tilde slightly; updated the documentations . . . 1
1.2	General: refined the paths and the outline production slightly; solved the BlueValues zones overlap problem; separated the map file from the dtx file; added a list of files to the README; improved the documentations	1	1.6 General: removed a bug which made the depth of chained lowercase letters too large (wrong depth of letter ij) and took the wrong italic correction of chained letters, updated the documentations 1
1.3	General: refined the paths again slightly; added a randomize feature to the OpenType versions of the script faces; improved the typeface documentation	1	1.7 General: added Greek, changed to Unicode (the sources now have to be compiled with METAPOST with the mf2outline base or with mf2outline.py), some kerning pairs have been removed and many others have been added, adjusted the OpenType font information, updated the documentations 1
1.4	General: reduced the number of files drastically, this has changed the shape of letters like IJ in the script faces; improved the English of the typeface documentation; added a compiled version of the package documentation	1	2017/04/07 General: corrected two accented Greek glyphs, removed version numbers, future versions will be given in dates 1
1.5	General: changed the shapes of		2017/04/15 General: added the sources of fetamont-typeface.pdf 1

References

- [Romer17] Linus Romer. *The Fetamont Typeface*. 2017
- [Vieth99] Ulrik Vieth. *The mflogo package*. mirrors.ctan.org/macros/latex/contrib/mflogo/mflogo.pdf, 1999