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 \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 Lua\TeX{}. 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 \texttt{fetamont} package.

If you use the \texttt{fetamont} package as a replacement for the \texttt{mflogo} package you will probably only need the control sequences \texttt{\MF}, \texttt{\MP} and \texttt{\MT} which produce the well known logos META\textsc{font}, META\textsc{post} and META\textsc{type1}.

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

To gain access to all faces of Fetamont you may sometimes additionally need \texttt{\ffmfamily} or \texttt{\ffmufamily} (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 \textit{Computer Modern Sans Bold}, whereas the demibold face is the better choice for a combination with \textit{Computer Modern Extended Bold}:

\begin{center}
\textbf{META Serif} \\
\textbf{Sans META}
\end{center}

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

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

<table>
<thead>
<tr>
<th>original name</th>
<th>Fetamont name</th>
<th>symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>light</td>
<td>l</td>
</tr>
<tr>
<td>medium</td>
<td>medium</td>
<td>r</td>
</tr>
<tr>
<td>demibold</td>
<td>bold</td>
<td>b</td>
</tr>
<tr>
<td>bold</td>
<td>heavy</td>
<td>h</td>
</tr>
</tbody>
</table>

3.2 Script faces

The “crazy shapes” by D. E. Knuth show impressively the randomization power of META\textsc{font}. 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:

\begin{center}
¿DONDE? -- ¡AQUI!
\end{center}
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**

**Bold Condensed 40**

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 `fmm`, 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:

<table>
<thead>
<tr>
<th>Upright</th>
<th>Oblique</th>
</tr>
</thead>
<tbody>
<tr>
<td>r8</td>
<td>o8</td>
</tr>
<tr>
<td>b8</td>
<td>bo8</td>
</tr>
<tr>
<td>h8</td>
<td>ho8</td>
</tr>
<tr>
<td>r9</td>
<td>o9</td>
</tr>
<tr>
<td>b9</td>
<td>bo9</td>
</tr>
<tr>
<td>h9</td>
<td>ho9</td>
</tr>
<tr>
<td>l10</td>
<td>lo10</td>
</tr>
<tr>
<td>r10</td>
<td>o10</td>
</tr>
<tr>
<td>b10</td>
<td>bo10</td>
</tr>
<tr>
<td>h10</td>
<td>ho10</td>
</tr>
<tr>
<td>lc10</td>
<td>lco10</td>
</tr>
<tr>
<td>c10</td>
<td>co10</td>
</tr>
<tr>
<td>bc40</td>
<td>bco40</td>
</tr>
<tr>
<td>Condensed Upright</td>
<td>Condensed Oblique</td>
</tr>
<tr>
<td>Ultradecondensed Upright</td>
<td>Ultradecondensed Oblique</td>
</tr>
<tr>
<td>lw10</td>
<td>lwo10</td>
</tr>
<tr>
<td>w10</td>
<td>wo10</td>
</tr>
<tr>
<td>bw10</td>
<td>bwo10</td>
</tr>
<tr>
<td>hw10</td>
<td>hwo10</td>
</tr>
</tbody>
</table>

3.6 NFSS–Access To All Faces

The following tabular shows the NFSS–access for every Fetamont face.
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 Fétamont. Additionally, there is also a script font family (T1ffmw.fd).

The italic faces are always silently substituted by oblique faces.

\+

\DeclareFontFamily{T1}{ffm}{}

Light faces:

\DeclareFontShape{T1}{ffm}{l}{n}{<-> ffm10}{}
\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}{<-> ffm8}
\DeclareFontShape{T1}{ffm}{m}{sl}{<-> ffm9}
\DeclareFontShape{T1}{ffm}{m}{it}{<-> ffm/m/it}{}

\-8 > ffm8
<9 > ffm9
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}{
  <-8> ffmb8
  <-9> ffmb9
  <-10-> ffmb10
}{
}
\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}{<-> ffm1c10}\{}
\DeclareFontShape{T1}{ffm}{lc}{sl}{<-> ffmlco10}\{}
\DeclareFontShape{T1}{ffm}{lc}{it}{<-> ssub * ffm1c/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}{<-> ffmbo40}\{}
\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}\{}

The script faces need an own family for a proper NFSS-access:
\(\langle{\scriptscriptstyle{T1}\texttt{ffm}}\rangle\)
\DeclareFontFamily{T1}{ffmw}{}
\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}{<-> ffmlu10}\{}
\DeclareFontShape{T1}{ffmw}{m}{sl}{<-> ffmlwo10}\{}
\DeclareFontShape{T1}{ffmw}{m}{it}{<-> ssub * ffmw/m/sl}\{}

Bold faces (bold extended faces are silently substituted):
\DeclareFontShape{T1}{ffmw}{b}{n}{<-> ffmbu10}\{}
\DeclareFontShape{T1}{ffmw}{b}{sl}{<-> ffmbwo10}\{}
\DeclareFontShape{T1}{ffmw}{b}{it}{<-> ssub * ffmw/b/sl}
Heavy EXTRA bold faces (three different optical sizes):
\DeclareFontShape{T1}{ffmw}{eb}{n}{
  <-> ssub * ffmw/b/n
}\}
\DeclareFontShape{T1}{ffmw}{eb}{sl}{
  <-> ssub * ffmw/b/sl
}\}
\DeclareFontShape{T1}{ffmw}{eb}{it}{
  <-> ssub * ffmw/b/sl
}\}

\begin{verbatim}
\end{verbatim}

\section{The style file: fetamont.sty}

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

\texttt{\textfamily}

This is the declarative font changing command for the “normal” font family.
\begin{verbatim}
\DeclareRobustCommand\ffmfamily{\
  \not@math@alphabet\ffmfamily\relax\
  \fontencoding{T1}\fontfamily{ffm}\selectfont}
\end{verbatim}

\texttt{\textfamily}

This is the declarative font changing command for the script font family.
\begin{verbatim}
\DeclareRobustCommand\ffmwfamily{\
  \not@math@alphabet\ffmwfamily\relax\
  \fontencoding{T1}\fontfamily{ffmw}\selectfont}
\end{verbatim}

\texttt{\textfamily}

This is basically the same as \texttt{\textfamily} but takes one argument.
\begin{verbatim}
\DeclareTextFontCommand{\textffm}{\ffmfamily}
\end{verbatim}

\texttt{\textfamily}

This is basically the same as \texttt{\textfamily} but takes one argument.
\begin{verbatim}
\DeclareTextFontCommand{\textffmw}{\ffmwfamily}
\end{verbatim}

\texttt{\textfamily}

These are the definitions of the METAfont, METAPOST and METATYPE1 logos.
\begin{verbatim}
\end{verbatim}
Change History

1.0  General: initial version ......... 1
1.1  General: changed the filename  
     ffmchar_ij.mf to ffmchar_ijlower.mf ......... 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
1.2  General: refined the paths and the  
     outline production slightly;  
     solved the BlueValues zones  
     overlap problem; separated the  
     map file from the dtex file;  
     added a list of files to the  
     README; improved 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
1.4  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
1.5  General: changed the shapes of  
     some digits, added additional  
     kernings, mainly between  
     letters and numbers; changed  
     the shape of the tilde slightly;  
     updated the documentations . . 1
1.6  General: added Greek, changed to  
     Unicode (the sources now have  
     to be compiled with  
     TEX\textsc{Post} 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
1.7  General: added two accented  
     Greek glyphs, removed version  
     numbers, future versions will  
     be given in dates ......... 1 2017/04/15

References

[Romer17] Linus Romer. The Fetamont Typeface. 2017

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