Using Chivo fonts with LaTeX*

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Abstract

This package provides the necessary files to use the Chivo fonts with LaTeX. Chivo is a set of eight fonts provided by Héctor Gatti & Omnibus-Type Team under the Open Font License (OFL).

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1 Introduction

Chivo\textsuperscript{1} is a set of eight fonts created by Héctor Gatti & Omnibus-Type Team and provided by Omnibus-Type under the SIL Open Font License, Version 1.1. From the web page:

“Chivo is a grotesque typeface. The strength of Chivo makes it ideal for highlights and headlines. Chivo Regular’s elegance is ideal for combining with Chivo Black’s strength and for continuous reading settings.”

The fonts were obtained from Omni-Type web page\textsuperscript{2}. (v1.003, 8 fonts, 335 glyphs each).

2 Installation

I suggest you use MikTeX or TeXlive and wait until the fonts are distributed for your TeX installation via their package manager.

3 Usage

The fonts can be used with traditional (pdf)TeX engine and newer XeTeX and LuaTeX engines which can access OTF fonts directly. They are described below. In general, this bundle tries not to be smart and loads only kvoptions.sty, mweights.sty or fontspec.sty, depending on the used engine. As the result, some work must be done by the user.

3.1 Engine independent options

A package Chivo.sty is provided which can be loaded in the preamble as usual:

\usepackage{Chivo}

Loading the package changes the document’s sans serif font to Chivo. The package offers some options.

\begin{itemize}
  \item \texttt{regular | light} \quad The default font series is set with one of \texttt{regular} or \texttt{light} – \texttt{regular} is the default. Note that these options are defined as complementary ones. Setting one option to ‘false’ sets the other one automatically to ‘true’, i.e.
    \begin{itemize}
      \item \texttt{\usepackage[regular = false]{Chivo}}
      \item or
      \texttt{\usepackage[light = true]{Chivo}}
    \end{itemize}
    have the same effect.
  \item \texttt{bold | black} \quad The default bold series is set with one of \texttt{bold} or \texttt{black} – \texttt{bold} is the default. Again, these options are complementary as well.
  \item \texttt{familydefault} \quad The main font of a document can be switched to Chivo with package option \texttt{familydefault} or \texttt{familydefault=true}, e.g.:
\end{itemize}

\footnotesize
1. Copyright © 2011–2015, Omnibus-Type (http://www.omnibus-type.com)

2
If the automatic engine detection fails, it can be specified by the user with one of opentype or type1. Note that these options do not take a boolean value true or false.

3.2 (pdf)LaTeX specific option

scale The size of the Chivo fonts can be adjusted with the scale option, e.g.:

\usepackage[scale=0.97]{Chivo}

OT1, LY1, T1 and TS1 encodings are supported. Chivo.sty does not load the respective packages, it is up to user to load them, e.g.:

\usepackage[T1]{fontenc}
\usepackage{Chivo}
\usepackage{textcomp}

3.3 XeLaTeX and LuaLaTeX specific options

These engines can access OTF fonts directly. The standard interface for this purpose is fontspec.sty\(^3\). Chivo.sty detects if XeLaTeX or LuaLaTeX is used and based on options given by regular|light and/or bold|black, it uses \defaultfontfeatures to define Chivo and passes it to \setsansfont, e.g.:

\defaultfontfeatures[Chivo]{
  Extension = .otf ,
  BoldFont = Chivo-Black ,
  ItalicFont = Chivo-LightItalic ,
  BoldItalicFont = Chivo-BlackItalic ,
  UprightFont = Chivo-Light
}
\AtBeginDocument{\setsansfont{Chivo}}

The scale package option does not work with fontspec.sty. This and any other fontspec.sty option can be set with \defaultfontfeatures+, e.g.:

\usepackage{fontspec}
\usepackage{Chivo}
\defaultfontfeatures+[Chivo]{
  Ligatures = TeX ,
  Scale = MatchLowercase ,
  Color = blue
}

\(^3\) http://ctan.org/pkg/fontspec
### 4 OT1 encoding font table

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---

### Notes

- The table above represents the T1 encoding font table.
- The columns represent different font encoding codes (0-7).
- Each row corresponds to a specific encoding character or symbol.
- The characters and symbols are arranged in a specific manner to ensure clarity and ease of understanding.
- This table is crucial for understanding font encoding and can be used for various applications requiring font recognition.
### 7 TS1 Encoding Font Table

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</tbody>
</table>

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*7*
8 Text samples

Regular


Italic


Bold


Bold italic

Black


Black italic


1234567890
Light


Light italic


9 Implementation

Font support files are generated by `autoinst`, invoked with:

```bash
autoinst \
   --encoding=OT1,T1,LY1 \
   --ts1 \
   --sanserif \
   --defaultlining \
   --defaulttabular \
   --nooldstyle \
   --noproportional \
   --nosmallcaps \
   --noswash \
   --notitling \
   --nosuperiors \
   --noinferiors \
   --fractions \
   --noornaments \
   --noupdmap \
   --verbose \
Chivo-*.otf
```

We don't use the Chivo.sty generated by `autoinst` and use our version instead.

9.1 Chivo.sty

```latex
\begin{package}
First, we need a switch to know which engine is used:
\newif\ifChivo@otf
\ifdefined\XeTeXinterchartoks \% we are in XeTeX
   \Chivo@otftrue
\else
   \ifdefined\directlua \% we are in LuaTeX
      \Chivo@otftrue
   \fi
\fi
Load the packages we rely on: fontspec.sty\(^4\) or mweights.sty\(^5\):
\ifChivo@otf
   \RequirePackage{fontspec}
\else
   \RequirePackage{mweights}
\fi

We use kvoptions\(^6\) for our purposes:
\RequirePackage{kvoptions}

Setup the keyval options:
```

4. [https://www.ctan.org/pkg/fontspec](https://www.ctan.org/pkg/fontspec)
5. [https://www.ctan.org/pkg/mweights](https://www.ctan.org/pkg/mweights)
6. [https://www.ctan.org/pkg/kvoptions](https://www.ctan.org/pkg/kvoptions)
The basic strategy for font related keys is to declare them as complementary options.

\SetupKeyvalOptions{%
  family = Chivo ,
  prefix = Chivo@
}

\DeclareBoolOption{regular}
\DeclareComplementaryOption{light}{regular}
\DeclareBoolOption{bold}
\DeclareComplementaryOption{black}{bold}

The family default switch is special: With (pdf)LATEX, it is a string option, with \textsc{XeLaTeX} and \textsc{LuaLaTeX}, it is a void option and generates a warning.

\ifChivo@otf
  \DeclareVoidOption{scale}{\relax}
\else
  \DeclareStringOption[1.0]{scale}
\fi

family default switches the default font to Chivo.
\DeclareBoolOption{familydefault}

The next 2 are for users where the automatic engine detection might fail.
\DeclareVoidOption{opentype}{\Chivo@otftrue}
\DeclareVoidOption{type1}{\Chivo@otffalse}

Execute the default options and process them.
\setkeys{Chivo}{regular,bold}
\ProcessKeyvalOptions{Chivo}

Definition for \texttt{regular} and \texttt{light} keys for traditional engines:
\ifChivo@otf \else
  \ifChivo@regular
    \def\mdseries@sf{m}
  \else
    \def\mdseries@sf{l}
  \fi
\fi

Definition for \texttt{bold} and \texttt{black} keys for traditional engines:
\ifChivo@otf \else
  \ifChivo@bold
    \def\bfseries@sf{b}
  \else
    \def\bfseries@sf{k}
  \fi
\fi

For \textsc{XeLaTeX}/\textsc{LuaLaTeX}, we define the font features depending on the given package options:
\ifChivo@otf
  \ifChivo@regular
    \ifChivo@bold
      \defaultfontfeatures[Chivo]
    \{
      Extension = .otf
    }
Switch the sans serif font to Chivo; the fonts provide only tabular lining figures. With fontspec, we delay the \setsansfont until \AtBeginDocument so that user can provide additional features with \defaultfontfeatures+.

\ifChivo@otf
\AtBeginDocument{%
\setsansfont{Chivo}%
}
\else
\renewcommand*{\sfdefault}{Chivo-TLF}
\fi

Switch the default font if the respective key is given:
\ifChivo@familydefault
\renewcommand*{\familydefault}{\sfdefault}
\fi
\ifChivo@otf\else

BoldFont = Chivo-Bold,
ItalicFont = Chivo-Italic,
BoldItalicFont = Chivo-BoldItalic,
UprightFont = Chivo-Regular

\defaultfontfeatures[Chivo]
{
Extension = .otf,
BoldFont = Chivo-Black,
ItalicFont = Chivo-Italic,
BoldItalicFont = Chivo-BlackItalic,
UprightFont = Chivo-Regular
}
\else
\defaultfontfeatures[Chivo]
{
Extension = .otf,
BoldFont = Chivo-Black,
ItalicFont = Chivo-Italic,
BoldItalicFont = Chivo-BlackItalic,
UprightFont = Chivo-Regular
}
\fi
\ifChivo@regular \else \edef\seriesdefault{\mdseries@sf} \fi
\ifChivo@bold \else \edef\bfdefault{\bfseries@sf} \fi
\fi
\fi
\fi
\fi
\fi
\fi
\fi
\fi

\section*{Change History}

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General: Initial version ............ 1