\LaTeX{} support for Droid

Version 3.0

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\section{Introduction}

The Droid typeface family was designed in the fall of 2006 by Ascender's Steve Matteson, as a commission from Google to create a set of system fonts for its Android platform. The goal was to provide optimal quality and comfort on a mobile handset when rendered in application menus, web browsers and for other screen text. It consists of Droid Serif, Droid Sans and Droid Sans Mono.
The font family is available in the Android Git tree [1] as TrueType-flavored OpenType files licensed under the Apache License version 2.0 [2].

This package provides support for Droid in \LaTeX, including Xe\LaTeX and \texttt{LuaLaTeX}. It includes the original OpenType fonts, as well as Type 1 versions, converted for this package using FontForge [3] for full support with \LaTeX and Dvips.

Notice that this package does not support the Droid Pro family sold by Ascender [4]. Notice also that the Noto font family [5] is considered to be the successor for Droid, with better Unicode coverage and more weights and shapes available.

## 2 Installation

These directions assume that your \LaTeX distribution is TDS-compliant.

Once the \texttt{droid.tds.zip} archive extracted:

1. Copy \texttt{doc/}, \texttt{fonts/}, and \texttt{tex/} directories to your \texttt{texmf/} directory (either your local or global \texttt{texmf/} directory)

2. Run \texttt{mktexlsr} to refresh the file name database and make \LaTeX aware of the new files

3. Run the following commands\(^2\) to make Dvips, dvipdf and \LaTeX aware of the new fonts:

\begin{verbatim}
 updmap-user --enable Map droidserif.map
 updmap-user --enable Map droidsans.map
 updmap-user --enable Map droidsansmono.map
\end{verbatim}

Note that this package requires the following packages to work:

- \texttt{fontspec} (for Xe\LaTeX/Lua\LaTeX support)
- \texttt{ifluatex}
- \texttt{ifxetex}
- \texttt{xkeyval}

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\(^1\) Prior to Android 5.
\(^2\) Use the \texttt{updmap-sys} command instead for a global installation.
3 Usage

3.1 Calling Droid

3.1.1 Using each font family separately

**Droid Serif** You can use the Droid Serif font family in a LaTeX document by adding the command

\usepackage{droidserif}

...to the preamble. The package supplies the \droidserif command to switch the current font to Droid Serif.

You can set LaTeX to use Droid Serif as standard font throughout the whole document by passing the default option to the package:

\usepackage[default]{droidserif}

**Droid Sans** As well, you can set LaTeX to use Droid Sans by adding the following command to the preamble.

\usepackage[default]{droidsans}

...The package supplies the \droidsans command to switch the current font to Droid Sans.

You can as well set Droid Sans as standard font with the default option to the droidsans package:

\usepackage[default]{droidsans}

...To set Droid Sans as default sans-serif only:

\usepackage[defaultsans]{droidsans}

**Droid Sans Mono** Finally, to use Droid Sans Mono, you can call the droidsansmono package as below:

\usepackage{droidsansmono}

...The package supplies the \droidsansmono command to switch the current font to Droid Sans Mono.

To set Droid Sans Mono as the default typewriter font, use the default-mono option:

\usepackage[defaultmono]{droidsansmono}
3.1.2 Using the Droid font families together

To make the use of the three Droid fonts families together most easy, a further macro package \texttt{droid} is provided:

\begin{verbatim}
\usepackage{droid}
\end{verbatim}

This will set Droid Serif, Droid Sans and Droid Sans Mono as the three main text font families.

3.2 OpenType vs. Type 1

Depending on the \LaTeX{} rendering engine used, the package will automatically use:

\begin{itemize}
  \item OpenType fonts with Xe\LaTeX{} and Lua\LaTeX{} (the \texttt{fontspec} package will be therefore loaded)
  \item Type 1 fonts with all other \LaTeX{} rendering engines (especially pdf\LaTeX{})
\end{itemize}

The package was written to provide same features whatever the \LaTeX{} rendering engine used. Notice that OpenType fonts supply more typographic features like stylistic alternatives. The table 1 describes all OpenType features supported by the Droid font family. Please refer to the \texttt{fontspec} package documentation to enable such features in your documents with Xe\LaTeX{} or Lua\LaTeX{}.

To force Type 1 fonts with Xe\LaTeX{} or Lua\LaTeX{}, use the \texttt{type1} option. This may be useful to avoid loading the \texttt{fontspec} package.

3.3 Font scaling

The fonts can be up- and downscaled by any factor. This can be used to make Droid fonts more friendly when used in company with other type faces, e.g., to adapt the x-height. The package option \texttt{scale=ratio} (or \texttt{scaled=ratio}) will scale the font according to \texttt{ratio} (1.0 by default), for example:

\begin{verbatim}
\usepackage[ scale=0.95 ]{droidserif}
\usepackage[ scale=0.95 ]{droidsans}
\usepackage[ scale=0.95 ]{droidsansmono}
\end{verbatim}

\begin{table}[h]
\centering
\begin{tabular}{lll}
\hline
Feature & Description & \texttt{fontspec} option \\
\hline
ccmp & Glyph Composition/Decomposition & Unsupported \\
kern & Kerning & Kerning=On \\
mark & Mark Positioning & Diacritics=MarkToBase \\
mk & Mark to Mark Positioning & Diacritics=MarkToMark \\
\hline
\end{tabular}
\caption{OpenType font features supported by Droid fonts}
\end{table}
Table 2: Kerning with OT1 and T1 encodings

<table>
<thead>
<tr>
<th>Font Series</th>
<th>Shape</th>
<th>OpenType font file</th>
</tr>
</thead>
<tbody>
<tr>
<td>Droid Serif Regular</td>
<td>m n</td>
<td>DroidSerif-Regular.ttf</td>
</tr>
<tr>
<td><em>Droid Serif Italic</em></td>
<td>m it</td>
<td>DroidSerif-Italic.ttf</td>
</tr>
<tr>
<td><em>Droid Serif Bold</em></td>
<td>b (bx) n</td>
<td>DroidSerif-Bold.ttf</td>
</tr>
<tr>
<td><em>Droid Serif Bold Italic</em></td>
<td>b (bx) it</td>
<td>DroidSerif-BoldItalic.ttf</td>
</tr>
<tr>
<td>Droid Sans Regular</td>
<td>m n</td>
<td>DroidSans.ttf</td>
</tr>
<tr>
<td><em>Droid Sans Bold</em></td>
<td>b (bx) n</td>
<td>DroidSans-Bold.ttf</td>
</tr>
<tr>
<td>Droid Sans Mono Regular</td>
<td>m n</td>
<td>DroidSansMono.ttf</td>
</tr>
</tbody>
</table>

Table 3: Available font styles

3.4 Encodings

The following encodings are supported:

**Latin** OT1, T1, TS1 (partial)

**Cyrillic** T2A, T2B, T2C, X2

**Greek** LGR (monotonic and polytonic for Droid Serif, monotonic only for Droid Sans and Droid Sans Mono)

To use one or another encoding, give the \TeX name to the fontenc package as usual, as in

\usepackage[T1]{fontenc}
\usepackage{droidserif}

As usual with OT1 encoded fonts, kerning with accented characters is treated poorly, if at all. Note difference in kerning between these two encoding in table 2. It is therefore advised to always use the Droid font family in any encoding than OT1 when typing diacritics.

3.5 Available weights and variants

Table 3 lists the available font series and shapes with their NFSS classification. Parenthesized combinations are provided via substitutions. Table 4 also lists all defined NFSS families for the Droid packages.

In addition to these shapes, Droid packages provide the following faked one:
Table 4: Droid NFSS families

<table>
<thead>
<tr>
<th>Font family</th>
<th>NFSS family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Droid Serif</td>
<td>droidserif</td>
</tr>
<tr>
<td>Droid Sans</td>
<td>droidsans</td>
</tr>
<tr>
<td>Droid Sans Mono</td>
<td>droidsansmono</td>
</tr>
</tbody>
</table>

- Slanted shape (sl) for Droid Serif, Droid Sans and Droid Sans Mono
- Upright italic shape (ui) for Droid Serif only

Samples of the font are available in the droid-samples.pdf file.

4 Known bugs and improvements

Please send bug reports and suggestions about the Open Sans \TeX support to Mohamed El Morabity.

4.1 Compatibility with previous versions

4.1.1 Legacy families

Previous versions of the package used to provide the following NFSS families for Droid:

- fdr for Droid Serif, with the \fdrfamily switch command
- fds for Droid Sans, with the \fdsfamily switch command
- fdm for Droid Sans Mono, with the \fdmfamily switch command

Such families and macros are still available in newer package versions. In particular, the following NFSS family aliases are now defined as below:

- fdr family is an alias for droidserif
- fds family is an alias for droidsans
- fdm family is an alias for droidsansmono

4.1.2 droidmono package

The droidmono package has been renamed to droidsansmono since version 3.0. The droidmono package is anyway still available for compatibility.
4.1.3 Smallcaps

Since the Droid font families don’t provide yet “real” smallcaps, faked ones were supplied by previous versions of the Droid packages (by scaling down uppercase letters), with a very poor result. Furthermore, there’s no convenient way to generate fake smallcaps with \TeX or \LaTeX\ engines and native OpenType fonts.

For these reasons, faked small caps are no longer provided, starting with version 3.0 of the Droid packages. Anyway \LaTeX should automatically substitute missing smallcap shapes by normal ones.

5 License

These packages are released under the \LaTeX project public license, either version 1.3c or above [6]. Anyway both the TrueType and Type 1 files are delivered under the Apache License version 2.0 [2].

References