LaTeX support for Droid
Version 3.0

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1 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][1] as TrueType-flavored OpenType files licensed under the Apache License version 2.0 [2].

This package provides support for Droid in LaTeX, including XeLaTeX and 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 TeX distribution is TDS-compliant.

Once the `droid.tds.zip` archive extracted:

1. Copy `doc/`, `fonts/`, and `tex/` directories to your `texmf/` directory (either your local or global `texmf/` directory)
2. Run `mktexlsr` to refresh the file name database and make TeX aware of the new files
3. Run the following commands[2] to make Dvips, dvipdf and TeX aware of the new fonts:

```
updmap-user --enable Map droidserif.map
updmap-user --enable Map droidsans.map
updmap-user --enable Map droidsansmono.map
```

Note that this package requires the following packages to work:

- `fontspec` (for XeLaTeX/LuaLaTeX support)
- `ifluatex`
- `ifxetex`
- `xkeyval`

[1] Prior to Android 5.

[2] Use the `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 `defaultmono` option:

```
\usepackage[defaultmono]{droidsansmono}
```

Feature	Description	`fontspec` option
`ccmp`	Glyph Composition/Decomposition	Unsupported
`kern`	Kerning	`Kerning=On`
`mark`	Mark Positioning	`Diacritics=MarkToBase`
`mkmk`	Mark to Mark Positioning	`Diacritics=MarkToMark`

Table 1: OpenType font features supported by Droid fonts

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 `droid` is provided:

```
\usepackage{droid}
```

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:

- OpenType fonts with XeLaTeX and LuaLaTeX (the `fontspec` package will be therefore loaded)
- Type 1 fonts with all other LaTeX rendering engines (especially pdfLaTeX)

The package was written to provide same features whatever the TeX 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 `fontspec` package documentation to enable such features in your documents with XeLaTeX or LuaLaTeX.

To force Type 1 fonts with XeLaTeX or LuaLaTeX, use the `type1` option. This may be useful to avoid loading the `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 `scale=`*ratio* (or `scaled=`*ratio*) will scale the font according to *ratio* (1.0 by default), for example:

```
\usepackage[scale=0.95]{droidserif}
\usepackage[scale=0.95]{droidsans}
\usepackage[scale=0.95]{droidsansmono}
```

OT1-encoded	To Ta Té
T1-encoded	To Ta Té

Table 2: Kerning with OT1 and T1 encodings

Font	Series	Shape	OpenType font file
Droid Serif Regular	m	n	DroidSerif-Regular.ttf
Droid Serif Italic	m	it	DroidSerif-Italic.ttf
Droid Serif Bold	b (bx)	n	DroidSerif-Bold.ttf
Droid Serif Bold Italic	b (bx)	it	DroidSerif-BoldItalic.ttf
Droid Sans Regular	m	n	DroidSans.ttf
Droid Sans Bold	b (bx)	n	DroidSans-Bold.ttf
Droid Sans Mono Regular	m	n	DroidSansMono.ttf

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 LaTeX 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:

Font family	NFSS family
Droid Serif	`droidserif`
Droid Sans	`droidsans`
`Droid Sans Mono`	`droidsansmono`

Table 4: Droid NFSS families

- *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 LaTeX 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 XeTeX or LuaTeX 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

[1] http://android.git.kernel.org/?p=platform/frameworks/base.git;a=tree;f=data/fonts

[2] http://www.apache.org/licenses/LICENSE-2.0

[3] https://fontforge.github.io/

[4] http://www.DroidFonts.com/

[5] https://www.google.com/get/noto/

[6] http://www.latex-project.org/lppl/lppl-1-3c.html