

The Arialmt package – A FrankenFont L^AT_EX style

Luci Ellis

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The package `arialmt.sty` is a variant of Olaf Dietrich's `sfmath.sty` that implements Arial as the text and main math font in L^AT_EX documents. Because Arial is a TrueType font, you must be using pdfL^AT_EX or a variant to compile your document.

As well as the work of Olaf Dietrich and Stephen Hartke, this package would not be possible without the inspiration of Thierry Bouche's original `mathfont.sty` package, which showed me that it was possible to meld the text font into math usage, and thus get 'FrankenFont' documents that actually look quite reasonable.

1 Requirements

The package relies on the `a rev` package by Stephen Hartke, which comes with T_EX-Live 2007 and MikT_EX. The package sets both normal and sans-serif text to Arial, and monospaced text to Bera Mono.

2 Installation

Arial was one of the Core Web Fonts from Microsoft. If you do not already have it, you can download it from Sourceforge at http://sourceforge.net/project/showfiles.php?group_id=34153.

The installation process works as follows.

1. Download or make copies of the Arial fonts. You will need to rename them as follows:
 - ArialMT (Roman) to `marr16.ttf`
 - Arial-BoldMT to `marb16.ttf`
 - Arial-ItalicMT to `marri16.ttf`
 - Arial-BoldItalicMT to `marbi16.ttf`
2. Expand the `arial.zip` file and move the folders inside it to the required places in your local `texmf` folder hierarchy.
 - Move the Arial folder inside the `tex` folder somewhere into `texmf/tex/latex`
 - Move the Arial folder inside the `tfm` folder into `texmf/fonts/tfm`
 - Move the Arial folder inside the `vf` folder into `texmf/fonts/vf`
 - Move the two files with `.enc` endings, `T1-WGL4.enc` and `TS1-AGL.enc` into `texmf/fonts/enc` (if you haven't installed them already)
 - Move the `arial.map` file into `texmf/fonts/map/pdftex`

- Perform whatever procedure your T_EX distribution requires to update the maps and tell T_EX that the files exist.

You can then call the font, as shown.

3 Package contents

```

\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{arialmt}
[2007/05/25 0.1 by Luci Ellis]
%\RequirePackage{arev}
\RequirePackage[T1]{fontenc}
\RequirePackage{amsmath}
\RequirePackage{arev}
\newcommand{\@textfont}{mar}
\renewcommand{\familydefault}{\@textfont}% defines text font as Arial
\renewcommand{\sfdefault}{\@textfont}
\renewcommand{\rmdefault}{\@textfont}

\newcommand{\math@sfGreek}{zavm}

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% Math font - modified from sfmath.sty by Olaf Dietrich
% Change font for digits and "operators" (\sin, \exp, ...)
% to default sans serif font
\SetSymbolFont{operators}{normal}{T1}{\@textfont}{m}{n}
\SetSymbolFont{operators}{bold}{T1}{\@textfont}{b}{n}
% change letters
\DeclareSymbolFont{SFMath}{T1}{\@textfont}{m}{sl}
\SetSymbolFont{SFMath}{normal}{T1}{\@textfont}{m}{sl}

\DeclareMathSymbol{A}{\mathalpha}{SFMath}{'A}
\DeclareMathSymbol{B}{\mathalpha}{SFMath}{'B}
\DeclareMathSymbol{C}{\mathalpha}{SFMath}{'C}
\DeclareMathSymbol{D}{\mathalpha}{SFMath}{'D}
\DeclareMathSymbol{E}{\mathalpha}{SFMath}{'E}
\DeclareMathSymbol{F}{\mathalpha}{SFMath}{'F}
\DeclareMathSymbol{G}{\mathalpha}{SFMath}{'G}
\DeclareMathSymbol{H}{\mathalpha}{SFMath}{'H}
\DeclareMathSymbol{I}{\mathalpha}{SFMath}{'I}
\DeclareMathSymbol{J}{\mathalpha}{SFMath}{'J}
\DeclareMathSymbol{K}{\mathalpha}{SFMath}{'K}
\DeclareMathSymbol{L}{\mathalpha}{SFMath}{'L}
\DeclareMathSymbol{M}{\mathalpha}{SFMath}{'M}
\DeclareMathSymbol{N}{\mathalpha}{SFMath}{'N}
\DeclareMathSymbol{O}{\mathalpha}{SFMath}{'O}
\DeclareMathSymbol{P}{\mathalpha}{SFMath}{'P}
\DeclareMathSymbol{Q}{\mathalpha}{SFMath}{'Q}
\DeclareMathSymbol{R}{\mathalpha}{SFMath}{'R}
\DeclareMathSymbol{S}{\mathalpha}{SFMath}{'S}
\DeclareMathSymbol{T}{\mathalpha}{SFMath}{'T}
\DeclareMathSymbol{U}{\mathalpha}{SFMath}{'U}
\DeclareMathSymbol{V}{\mathalpha}{SFMath}{'V}
\DeclareMathSymbol{W}{\mathalpha}{SFMath}{'W}
\DeclareMathSymbol{X}{\mathalpha}{SFMath}{'X}

```

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\DeclareMathSymbol{Y}{\mathalpha}{SFMATH}{'Y}
\DeclareMathSymbol{Z}{\mathalpha}{SFMATH}{'Z}
\DeclareMathSymbol{a}{\mathalpha}{SFMATH}{'a}
\DeclareMathSymbol{b}{\mathalpha}{SFMATH}{'b}
\DeclareMathSymbol{c}{\mathalpha}{SFMATH}{'c}
\DeclareMathSymbol{d}{\mathalpha}{SFMATH}{'d}
\DeclareMathSymbol{e}{\mathalpha}{SFMATH}{'e}
\DeclareMathSymbol{f}{\mathalpha}{SFMATH}{'f}
\DeclareMathSymbol{g}{\mathalpha}{SFMATH}{'g}
\DeclareMathSymbol{h}{\mathalpha}{SFMATH}{'h}
\DeclareMathSymbol{i}{\mathalpha}{SFMATH}{'i}
\DeclareMathSymbol{j}{\mathalpha}{SFMATH}{'j}
\DeclareMathSymbol{k}{\mathalpha}{SFMATH}{'k}
\DeclareMathSymbol{l}{\mathalpha}{SFMATH}{'l}
\DeclareMathSymbol{m}{\mathalpha}{SFMATH}{'m}
\DeclareMathSymbol{n}{\mathalpha}{SFMATH}{'n}
\DeclareMathSymbol{o}{\mathalpha}{SFMATH}{'o}
\DeclareMathSymbol{p}{\mathalpha}{SFMATH}{'p}
\DeclareMathSymbol{q}{\mathalpha}{SFMATH}{'q}
\DeclareMathSymbol{r}{\mathalpha}{SFMATH}{'r}
\DeclareMathSymbol{s}{\mathalpha}{SFMATH}{'s}
\DeclareMathSymbol{t}{\mathalpha}{SFMATH}{'t}
\DeclareMathSymbol{u}{\mathalpha}{SFMATH}{'u}
\DeclareMathSymbol{v}{\mathalpha}{SFMATH}{'v}
\DeclareMathSymbol{w}{\mathalpha}{SFMATH}{'w}
\DeclareMathSymbol{x}{\mathalpha}{SFMATH}{'x}
\DeclareMathSymbol{y}{\mathalpha}{SFMATH}{'y}
\DeclareMathSymbol{z}{\mathalpha}{SFMATH}{'z}

\DeclareMathSymbol{\imath}{\mathalpha}{SFMATH}{"10}
\DeclareMathSymbol{\jmath}{\mathalpha}{SFMATH}{"11}

\DeclareMathAlphabet{\mathscr}{U}{rsfs}{m}{n} % Ralph Smith Formal Script
\DeclareSymbolFont{SFMATHGreeK}{OT1}{\math@sfGreeK}{m}{n}
\SetSymbolFont{SFMATHGreeK}{normal}{OT1}{\math@sfGreeK}{m}{n}
\SetSymbolFont{SFMATHGreeK}{bold}{OT1}{\math@sfGreeK}{b}{n}
% Redeclaring uppercase Greek and math accents back to Arev
% Because Arial doesn't have Greek letters in T1 encoding
% And the Arial T1 accents just look bad
\DeclareMathSymbol{\Gamma}{\mathalpha}{SFMATHGreeK}{"00}
\DeclareMathSymbol{\Delta}{\mathalpha}{SFMATHGreeK}{"01}
\DeclareMathSymbol{\Theta}{\mathalpha}{SFMATHGreeK}{"02}
\DeclareMathSymbol{\Lambda}{\mathalpha}{SFMATHGreeK}{"03}
\DeclareMathSymbol{\Xi}{\mathalpha}{SFMATHGreeK}{"04}
\DeclareMathSymbol{\Pi}{\mathalpha}{SFMATHGreeK}{"05}
\DeclareMathSymbol{\Sigma}{\mathalpha}{SFMATHGreeK}{"06}
\DeclareMathSymbol{\Upsilon}{\mathalpha}{SFMATHGreeK}{"07}
\DeclareMathSymbol{\Phi}{\mathalpha}{SFMATHGreeK}{"08}
\DeclareMathSymbol{\Psi}{\mathalpha}{SFMATHGreeK}{"09}
\DeclareMathSymbol{\Omega}{\mathalpha}{SFMATHGreeK}{"0A}
\DeclareMathSymbol{\upDelta}{\mathalpha}{SFMATHGreeK}{"01}
\DeclareMathSymbol{\upOmega}{\mathalpha}{SFMATHGreeK}{"0A}
% Accents
\DeclareMathAccent{\grave}{\mathord}{SFMATHGreeK}{"12}
\DeclareMathAccent{\acute}{\mathord}{SFMATHGreeK}{"13}
\DeclareMathAccent{\breve}{\mathord}{SFMATHGreeK}{"1D}

```

```
\DeclareMathAccent{\hat}{\mathord}{SFMathGreek}{"5E}  
\DeclareMathAccent{\tilde}{\mathord}{SFMathGreek}{"7E}  
\DeclareMathAccent{\bar}{\mathord}{SFMathGreek}{"16}  
\DeclareMathAccent{\dot}{\mathalpha}{SFMathGreek}{"5F}  
\DeclareMathAccent{\ddot}{\mathalpha}{SFMathGreek}{"7F}  
  
\endinput
```