The LaTeX macro package hvmaths

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1 Overview

The LaTeX macro package hvmaths supports typesetting with the font familiy 'Micropress HV-Math', version 1.2. This font family is made up from Adobe Helvetica and additional fonts so as to provide the character sets for LaTeX's text, text companion (partially) and mathematical font encodings.

2 Usage

Loading the package

```
\usepackage{hvmaths}
```

effects the following:

- The default sans serif font family for typesetting text is changed to `hvr`, i. e. Micropress HV-Math.
- The sans serif font family will be the default for the whole document.
- The MicroPress HV-Math fonts will be used for typesetting math, too.
- A new mathematical alphabet `\mathbold` provides bold slanted letters, including Greek.

Using the hvmaths package requires also the package keyval, which is part of the GRAPHICS bundle and should be part of any decent LaTeX system.

2.1 Font encoding

The package does *not* change the default output font encoding from OT1. It is, however, recommended to make use of HV-Math through the extended T1 and TS1 encodings, so as to provide access to all glyphs. This is enabled by the following additional commands:

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

2.2 Inter-line spacing

Due to the relatively large x-height of Helvetica, the leading of the standard LaTeX document classes may be to small. Since this is a question of document design and line width, the package does *not* care for this. (See, however, the description of the scaled option below!)

2.3 Package options

2.3.1 The option slantedGreek

When the macro package is loaded using this option, uppercase Greek letters will, by default, be slanted. Regardless of the option, the new commands `\upDelta` and `\upOmega` will *always* provide an upright Δ and Ω.

2.3.2 The option roman

This option will cause HV-Math to be mapped to the default 'roman' font family instead of the 'sans serif' one. This is provided for compatibility with the former package hvmath only and should normally not be used.

2.3.3 The option sans

Loading the package with this option will only change the sans serif text font family to Helvetica. The default font family and the math fonts are untouched. Thus, the hvmaths package will behave like the PSNFSS package helvet.

Using both sans and roman does not make sense, of course, and the sans option will be ignored then.

2.3.4 The option scaled

The cap height of Helvetica is noticeably larger than the cap height of most other fonts (incl. CM) when used at the same nominal size. As a result, it may become difficult to mix fonts or add further math alphabets. This can be fixed by loading the hvmaths package with the option `[scaled=`⟨*scale*⟩`]`, e.g.:

```
\usepackage[scaled=.92]{hvmaths}
```

This will load the font family `phv` (Helvetica) for sans-serif, scaled down to 92% of its 'natural' size, which is suitable for use with Adobe Times.

The ⟨*scale*⟩ can be omitted:

```
\usepackage[scaled]{hvmaths}
```

A default scaling of 0.95 will be assumed then, which makes the height of the Helvetica capitals comply with most other typeface families.

As a side effect, the default line spacing of the standard LaTeX document classes may be sufficient for the now scaled-down Helvetica, especially when the line width is not too large.

3 Availability and support

The latest version of this package can be obtained from the directory

`macros/latex/contrib/supported/hvmath/`

of any CTAN host.
The HV-Math fonts are provided by

MicroPress, Inc.
6830 Harrow Street, Forest Hills NY 11375, USA
`<http://www.micropress-inc.com>`

Please, address questions or bug reports via email to

`<support@micropress-inc.com>`.

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