

pzccal.sty: calligraphic math alphabet with Zapf Chancery

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Identification:

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{pzccal}
[2011/02/03 v0.1 Zapf Chancery calligraphic math alphabet]
```

The Comprehensive LaTeX Symbol List by Scott Pakin describes the use of Zapf Chancery as a mathematical alphabet that contains capital and small Latin letters as well as digits. This allows full coverage of the *script* Unicode Mathematical Alphabet with 8-bit LaTeX engines.

This package sets up the Zapf Chancery font as script (calligraphic) math alphabet `\mathpzc`. It provides options to scale the font and to configure the alias command name. By default, *pzccal* overwrites the predefined math alphabet command `\mathcal`.

Options

Options are defined with the key=value interface provided by `kvoptions`:

```
\RequirePackage{kvoptions}
```

cmdname

The name of the math alphabet command alias (default `\mathcal`). An existing command is overwritten without asking.

```
\DeclareStringOption[mathcal]{cmdname}
```

mathcal, mathscr, mathpzc

For compatibility with *eucal*, the `mathcal` and `mathscr` options are equivalent to `cmdname=mathcal` and `cmdname=mathscr`. The option `mathpzc` prevents aliasing to a new name:

```

\DeclareVoidOption{mathcal}{} % this is the default
\DeclareVoidOption{mathscr}{\renewcommand{\pzccal@cmdname}{mathscr}}
\DeclareVoidOption{mathpzc}{\renewcommand{\pzccal@cmdname}{mathpzc}}

```

scaled

The Zapf Chancery font can be scaled with the scaled option. The default is to enlarge the font to get a matching size without making it too dark:

```

\DeclareStringOption[1.125]{scaled}

\ProcessKeyvalOptions*

```

Implementation

Scaling

Define the font family pzcm as a scaled variant of pzc:

```

\DeclareFontFamily{OT1}{pzcm}{}
\DeclareFontShape{OT1}{pzcm}{mb}{it}{<-> s * [\pzccal@scaled] pzcmi7t}{}

```

Setup

As suggested in The Comprehensive LaTeX Symbol List:

```

\DeclareMathAlphabet{\mathpzc}{OT1}{pzcm}{mb}{it}

```

Alias

Make the new alphabet available under the command specified by the cmdname option (default: overwrite “mathcal”):

```

\@namedef{\pzccal@cmdname}{\mathpzc}

```

References

Alternative LaTeX script fonts that might be useful in math:

Auriocus Kalligraphicus: <http://www.tug.dk/FontCatalogue/aurical/>
Calligra: <http://www.tug.dk/FontCatalogue/calligra/> (bitmap)
Jana Skrivana: <http://www.tug.dk/FontCatalogue/janaskrivana/>
Vicentino: <http://www.tug.dk/FontCatalogue/vicentino/> (bitmap)