Using the *MathTımeProfessional* Font Supplement B with L^AT_EX*

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1 Typefaces

The *MathTımeProfessional* Font Supplement B provides Times-compatible script and fraktur typefaces.

MathTımeProfessional Math Script:

$\mathscr{ABC}[\mathscr{C}]\mathscr{DEFG}[\mathscr{G}]\mathscr{HIJKL}[\mathscr{L}]\mathscr{MNOPQ}[\mathscr{Q}]\mathscr{RST UVWXY}[\mathscr{Y}]\mathscr{Z}[\mathscr{Z}]$
$a\,b\,c\,d\,e\,f\,g\,h\,i\,\imath\,j\,\jmath\,k\,l\,m\,n\,o\,p\,q\,r[\imath]\,s\,t\,u\,v\,w\,x\,y\,z[z]$

MathTımeProfessional Math Fraktur:

$\mathfrak{ABCDEFGHIJKLMNOPQRST UVWXY}[\mathfrak{Y}]\mathfrak{Z}$
$\mathfrak{abcdefghiijklmnopqrstuvwx}[x]\mathfrak{y}[y]\mathfrak{z}$

Each typeface is available as a regular variant (shown above), and as a bold one.

2 The macro package mtpb

The package mtpb serves to access these typefaces; it can be used only in conjunction with the package mtpro, which should be loaded first. (Otherwise, mtpro gets loaded automatically without any package options.)

```
\usepackage[⟨options⟩]{mtpro}
\usepackage[⟨options⟩]{mtpb}
```

The package mtpb lets you select precisely which of the above fonts to use, and how. It must be loaded with at least one of the following options to have any effect:

mtpcal assigns Math Script to the math alphabet \mathcal, thus overwriting the default calligraphic typeface (CM Calligraphic or Euler Script)

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*This document refers to version v1.1 of the macro package mtpb.

mtpscr assigns Math Script to a new math alphabet `\mathscr`, while the behavior of `\mathcal` is unchanged

mtpfrak assigns Math Fraktur to a new math alphabet `\mathfrak`

The fonts comprise only the Latin alphabet (including `\imath` and `\jmath`), so the related math alphabet commands such as `\mathcal` should not be applied to Greek letters, numbers, or symbols.

NB: The symbols `\Re` and `\Im` from the basic *MathTimeProfessional* fonts are not exactly the same as the $\Re$ and $\Im$ from the Math Fraktur font. If you have loaded the mtpb package, and would prefer to have `\Re` and `\Im` use the letters from the `\mathfrak` alphabet, just redefine these macros appropriately:

```
\renewcommand{\Re}{\mathfrak{R}}
\renewcommand{\Im}{\mathfrak{I}}
```

2.1 Bold type

The corresponding bold fonts are accessible through the command `\bm`, which is provided by the macro package bm. For instance, `\bm{\mathfrak{A}}` prints the letter $\mathfrak{A}$ from the bold fraktur font. Of course, also the declaration `\boldmath` is honored.

The mtpro-specific command `\mathbcal`, too, works as expected and yields the bold series of the font assigned to `\mathcal`.

2.2 Alternative letter shapes

Several letters on the *MathTimeProfessional* Script and Fraktur fonts are available with alternative shapes:

Script:				Fraktur:			
C	$\mathcal{C}$	`\altC`	$\mathcal{C}$	Y	$\mathfrak{Y}$	`\altY`	$\mathfrak{Y}$
G	$\mathcal{G}$	`\altG`	$\mathcal{G}$	x	$\mathfrak{x}$	`\altx`	$\mathfrak{x}$
L	$\mathcal{L}$	`\altL`	$\mathcal{L}$	y	$\mathfrak{y}$	`\alty`	$\mathfrak{y}$
Q	$\mathcal{Q}$	`\altQ`	$\mathcal{Q}$				
Y	$\mathcal{Y}$	`\altY`	$\mathcal{Y}$				
Z	$\mathcal{Z}$	`\altZ`	$\mathcal{Z}$				
r	$\mathcal{r}$	`\altr`	$\mathcal{r}$				
z	$\mathcal{z}$	`\altz`	$\mathcal{z}$				

The `\alt...` commands are to be used only in conjunction with the *MathTimeProfessional* Script and Fraktur fonts, i.e., within the argument of an appropriate math alphabet command. For instance, `\mathfrak{\altx}` yields $\mathfrak{x}$, provided that *MathTimeProfessional* Fraktur is in fact assigned to `\mathfrak`. When the commands are used with other fonts, a warning message is issued and the corresponding 'normal' letter from the particular font is printed.

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