

The DSSerif Package

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DSSerif is short for Double Struck Serif, and, while based on the Courier clone of URW++ (version 2), though much distorted, its double striking and weights are very much in the style of the STIX double struck fonts. The main difference between the two is that STIX is sans serif, while DSSerif is not. The only package option is `scaled`, which may be used to scale the size, like

```
\usepackage[scaled=1.03]{ds serif}
```

The available characters are:

In regular weight:

0 1 2 3 4 5 6 7 8 9
ı j Γ Δ Θ Λ Π Σ Φ Ψ Ω
A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m
n o p q r s t u v w x y z

In bold:

0 1 2 3 4 5 6 7 8 9
ı j
A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m
n o p q r s t u v w x y z

If you load the `ds serif` package using

```
\usepackage{ds serif}
```

then most of these are accessed in the usual ways using `\mathbb`. E.g., `\mathbb{0}`, `\mathbb{A}` and `\mathbb{z}` produce 0, A and z unless `\boldmath` was previously specified, and 0, A and z otherwise. Finally, the macro `\mathbbb` may be used without `\boldmath` or `\bm` to render a bold symbol, e.g., `\mathbbb{A}` gives A.

Macros for non-alphabetic characters

The dotless i and j require the special macros `\bbdotlessi`, `\bbdotlessj` (or `\imathbb`, `\jmathbb`.) If you

load the package `bm`, then the macro `\bm{ }` will in all cases give you the bold version. E.g., `\bm{\imath\mathbb{b}}` gives $\mathbb{1}$, as expected. There are also some Greek letters available. Currently, these are only in regular weight and are pictured above, having names

```
\bbGamma
\bbDelta
\bbTheta
\bbLambda
\bbPi
\bbSigma
\bbPhi
\bbPsi
\bbOmega
```

I like to use \mathbb{i} and \mathbb{j} (or their bold versions) for unit vectors in the x and y directions, though this is not ISO compliant, and prefer the output to what I would get from the corresponding STIX symbols, where there can be problems distinguishing unserified glyphs.

The `DSSerif` glyphs may also be accessed using `mathalpha`:

```
\usepackage[bb=dsserif]{mathalpha}
```

(added after loading other math fonts) will redefine `\mathbb` and `\mathbbb` to point to the `DSSerif` versions. Use of either `dsserif` or `mathalpha` will entail using at least one of your precious math groups. You may find it sufficient to simply use the symbols as text. E.g.,

```
$x\in \text{\usefont{U}{DSSerif}{m}{n}C}}^n$
```

renders as $x \in \mathbb{C}^n$ without using an additional math group. If you try to do this with uppercase Greek letters, you'll find you have to use the slot numbers, as in

```
$x\in \text{\usefont{U}{DSSerif}{m}{n}\char1 }^n$ % Delta
```

If using `newtxmath`, version 1.55 or higher, with the `stix2` option, you will find the `DSSerif` alphabet built in though without the Greek letters, and it will not be necessary to load it with further commands. See the `newtx` documentation for further details.