Support for floating point operations on LaTeX-Level

–

v. 0.02

Herbert Voß

January 24, 2019

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1 Introduction

The upcoming LaTeX3 can already be used. It is more or less stable and macros will change only if really needed.

2 Package options

The package knows two optional arguments which, of course, have a corresponding name in package `siunitx`. One can also use that one.

name	*siunitx*	*description*
`useComma`	`output-decimal-marker={,}`	Output always a comma instead of the default dot.
`roundDigit`	`round-mode=places,round-precision=<value>`	round the given digit number.

3 Using the macros

309 715.670 96
309715.67096

```
\psCalculate{3.14126*314^2}\\ % Uses \num from siunitx
\pscalculate{3.14126*314^2} % doesn't use \num
```

Without using any additional argument all available digits are printed.

4 Optional arguments

All optional arguments of package `siunitx` can be used:

309715.67096
2 194 697,089 505 619
$2.194\,697\,089\,505\,619 \cdot 10^{6}$
$2.194\,697\,089\,505\,619 \times 10^{6}$
$21\,946.970\,895\,056\,19 \times 10^{2}$
2 194 697.089 505 619
2 194 697.090

```
\psCalculate[group-digits=false]{3.14126*314^2}\\
\psCalculate[output-decimal-marker={,}]{3.14126*314^2/sin(3)}\\
\psCalculate[exponent-product=\cdot,scientific-notation=true]{3.14126*314^2/sin(3)}\\
\psCalculate[scientific-notation=engineering]{3.14126*314^2/sin(3)}\\
\psCalculate[fixed-exponent=2,scientific-notation=fixed]{3.14126*314^2/sin(3)}\\
\psCalculate[round-precision=3]{3.14126*314^2/sin(3)}\\
\psCalculate[round-mode=places,round-precision=3]{3.14126*314^2/sin(3)}
```

For more optional argument to format the output have a look at the documentation of `siunitx`.

References

[1] The LaTeX3 project: The `expl3` package and LaTeX3 programming, 2017, CTAN:/latex/macros/contrib/l3kern (visited on 2/4/2018).

[2] — The `xfp` package – Floating Point Unit, CTAN:/pkg/xfp (visited on 2/4/2018).