

The `bxcalcux` package

Takayuki YATO (aka. “ZR”)

v1.1 [2020/09/25]

1 Overview

This package allows one to create a new unit of length that can be used in length expressions of the `calc` package. For example,

```
\newcalcunit{thou}{0.07227pt}% thousandth of inch
\setlength{\lengthA}{10thou}
```

will assign 0.72266 pt to `\lengthA`.¹

Supported format \LaTeX .

Supported engine Any engine with ε - \TeX extension.

Prerequisite packages `calc`, `etoolbox`.

2 Package Loading

Use `\usepackage` as usual, with no options.

```
\usepackage{bxcalcux}
```

3 Usage

- `\newcalcunit{<unit>}{<length>}` : Declares a new unit `<unit>` as equal to `<length>`. The unit name must consist only of alphabets. You can use relative units such as `0.5em` in `<length>`, and such relative units are resolved when `calc` expressions are evaluated.
- `\DeclareCalcUnit{<unit>}{<text>}` : (for \TeX nicians) Declares a new unit `<unit>` as equal to the unit expressed by a token list `<text>`, which must form a “unit of dimen” (in \TeX terminology). Here is an example.

```
\DeclareCalcUnit{ls}{\baselineskip}% current line skip
```

4 Notices

- Usually unit names are treated as case-insensitive; but as exception, unit names with a single letter are case-sensitive.
- You must not create a unit name that coincides with a prefix of existing (built-in or created) units or any keywords that could be used in `calc` expressions (such as `plus`, `fil`, etc.); otherwise unexpected things would occur.

¹Using `0.001in` instead of `0.07227pt` will give rather inaccurate results, since `0.001in` is evaluated to `0.7277 pt`.