The euflag LaTeX 2ε package[*]

A command to reproduce the flag of the European Union

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Summary

This package implements a single command \euflag which reproduces the official flag of the European Union (EU) using the built-in picture environment (no need for TikZ).

The flag is reproduced at 1em high based on the current font size, so it can be scaled arbitrarily by changing the font size locally (see examples in the table on page 6). An option allows for the flag baseline to be aligned on the bottom star.

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[*]This document corresponds to euflag *v.* 0.91β, dated 2023/12/30.

Contents

Typographic representation

In this document, the following information items are shown in this way:

Item	Description
`\command`	name of a LaTeX 'command' (TeX macro or control sequence)
`environment`	name of a LaTeX environment
`filename`	name of a file
`option`	name of an option to a LaTeX command, environment, class, or package
`package`	name of a LaTeX package
productname	a product name
`systemitem`	a computer system item (eg hostname or data value)
`<tag/>`	a tag name in a markup language (eg XML)
`varname`	a variable name in a supported language

Latest changes

v.0.91 (2023-12-30)

Regression update for updated db2dtx

- Move to ClassPack 1.26.

v.0.9 (2023-06-05)

Regression update

- Move to ClassPack 1.23.

v.0.8 (2020-05-22)

Reference update

- Added missing reference to Claudio's paper.

v.0.7 (2020-05-16)

Regression release

- Updated to use *ClassPack* 1.19;

- Switched all `@conformance` attributes on revision dates to `@YYYY-MM-DD`.

See p. for earlier changes.

1 Background

This package provides a command `\euflag` for reproducing the flag of the European Union. It follows exactly the official specification (Council of Europe and European Commission, 2019). The EU's web site says:

> The European flag symbolises both the European Union and, more broadly, the identity and unity of Europe.
>
> **It features a circle of 12 gold stars on a blue background. They stand for the ideals of unity, solidarity and harmony among the peoples of Europe.**
>
> The number of stars has nothing to do with the number of member countries, though the circle is a symbol of unity.

History of the European flag

The history of the flag goes back to 1955. The Council of Europe — which defends human rights and promotes European culture — chose the present design for its own use. In the years that followed, it encouraged the emerging European institutions to adopt the same flag.

In 1983, the European Parliament decided that the Communities' flag should be that used by the Council of Europe. In 1985, it was adopted by all EU leaders as the official emblem of the European Communities, later to become the European Union. In addition, all European institutions now have their own emblems.

https://europa.eu/european-union/about-eu/symbols/flag_en

The `\euflag` command provides a simple way to use the flag in any LaTeX document. Details of construction and spacing are taken from the official specification in the Graphics guide to the European emblem.

Since the publication of v0.4 of this package in February 2019, Claudio Beccari has investigated ways to produce the flag using only LaTeX's drawing facilities and the xfp package. He has written a very comprehensive paper about this in *Arstexnica*, the journal of the Gruppo Utilizzatori Italiani di TeX (GᵤIт), explaining how he did it (Beccari, 2019).

More recently Wilhelm Haager has produced the worldflags package, which reproduces all the world's flags — including the flag of the European Union — using the graphics language TikZ (Haager, 2021).

For an extensive discussion of the flag and its precursors and derivatives, see the Wikipedia entry for *Wikipedia* (Wikipedia contributors, 2024).

2 Usage

The flag is reproduced at 1em high, with the bottom edge at the current baseline like this: ▪ using the \euflag command. The baseline package option or an optional length argument to the \euflag command can be used to change this (see below).

The font size of the enclosing environment can be changed to make the flag appear at any size. In the examples below, the code and the flags are in m-type cells (middle-vertical-align, using the array package), so their apparent baselines differ.

```
{\tiny\euflag}
{\scriptsize\euflag}
{\footnotesize\euflag}
{\small\euflag}
{\normalsize\euflag}
{\large\euflag}
{\Large\euflag}

{\LARGE\euflag}

{\huge\euflag}




{\fontsize{64}{72}\selectfont\euf




{\fontsize{128}{0}\selectfont\euf
```

To move the flag down so that the bottom star's baseline becomes the flag's baseline, like this: ▪, load the package with the baseline option:

```
\usepackage[baseline]{euflag}
```

(that will affect all \euflag commands). Alternatively, use the optional argument to \euflag to lower the flag by ⅙em or whatever amount you

wish, on a single occasion, eg `\euflag[-.167em]`

Code for the

3   Implementation

3.1   Auto-initialisation

This section is added automatically by *ClassPack* as a preamble to all classes and style packages. For details see the |txdoc package documentation.

```
1  \NeedsTeXFormat{LaTeX2e}[2016/02/01]
2  \ProvidesPackage{euflag}[2023/12/30 v0.91
3    A command to reproduce the flag of the European Union]
```

3.2   Options

EUF@baseline Define an option to set the default position to align the lowest star with the text baseline of the surrounding text. The default is zero, meaning the bottom of the flag aligns with the text baseline; setting this option will lower the flag so that the lowest star aligns with the text baseline.

```
4  \newlength{\EUF@baseline}
5  \setlength{\EUF@baseline}{0pt}
6  \DeclareOption{baseline}{\setlength\EUF@baseline{-.167em}}
7  \DeclareOption*{%
8    \PackageWarning{euflag}{Unknown option
9      `\CurrentOption'; please Read The Fine Manual}%
10  }
11  \ProcessOptions
```

Now invoke the options.

```
12  \ExecuteOptions{}
13          \ProcessOptions\relax
```

3.3   Packages required for the package

Packages required for operation:

noto   Sets the Google NoTo typeface as the default.

```
14  \RequirePackage{noto}%
```

fancyhdr   Provide for running headers and footers.

```
15  \RequirePackage{fancyhdr}%
```

ltxcmds Some LaTeX kernel commands for general use, but in the case of *ClassPack*, particularly \ltx@ifpackageloaded.

```
16  \RequirePackage{ltxcmds}%
```

Define the ltx@ifpackageloaded command.

```
17  \ifdefined\IfPackageLoaded\relax
18    \else\newcommand{\IfPackageLoaded}[3]{%
19      \ltx@ifpackageloaded{#1}{#2}{#3}}\fi
```

parskip Creates paragraphs separated by white-space with no indentation.

```
20  \RequirePackage{parskip}%
```

xcolor Provide color.

```
21  \IfPackageLoaded{xcolor}{\relax}{%
22    \RequirePackage[svgnames]{xcolor}%
23  }%
24    \@ifundefined{T}{%
25      \newcommand{\T}[2]{{\fontencoding{T1}%
26        \selectfont#2}}}{}
```

There seems to be a bug in the T1 encoding of some package (unidentified, but possibly xcolor) which uses the command \T1, which is an impossibility (no digits allowed in command names). So we fake it here to stop LaTeX complaining, by dropping the first argument on the floor.

graphicx Provide for graphics (PNG, JPG, or PDF format (only) for pdflatex; EPS format (only) for standard LaTeX); and for reflection and rotation features.

```
27  \RequirePackage{graphicx}%
```

amssymb Provide for the American Mathematical Society's symbols (see their documentation for details).

```
28  \RequirePackage{amssymb}%
```

anyfontsize

```
29  \RequirePackage{anyfontsize}%
```

3.4   Changes to package defaults

The only changes are to implement the blue and yellow according to the specification. Note that exact Pantone® colour codes are not available, so the HTML values used on the EU web site are used here. The CMYK values are commented out in the code; they are available for users to test.

PantoneReflexBlue   As specified.

```
30  \definecolor{PantoneReflexBlue}{HTML}{003399}
31  %\definecolor{PantoneReflexBlue}{cmyk}{1.00,.67,0,.40}
```

PantoneYellow   As specified.

```
32  \definecolor{PantoneYellow}{HTML}{FFCC00}
33  %\definecolor{PantoneYellow}{cmyk}{0,.2,1,0}
```

We could have just used the Yellow from the xcolor package, but it was felt better to be explicit.

3.5   The flag

We now use the \bigstar command from the amssymb package (earlier versions used the \FiveStar command from the bbding package, but that did not reliably scale beyond about 100pt).

\eustar   It needs to scale, so we implement it as a command using \scalebox.

```
34  \newcommand{\eustar}{\scalebox{0.1}{\ensuremath{\bigstar}}}
```

This is the only slightly uncertain part of the implementation: the specification calls for the star to be $1/18$ of the height of the flag, but LaTeX only has access to the bounding-box of the glyph. The value of 0.1 given here is therefore experimental and subject to change in future in the light of feedback.

The command itself is a blue \colorbox containing the stars set at the clock-points of a circle in a LaTeX picture environment.

\makestars   Separate the making of the ring of stars from the flag itself so that the ring of stars can be used separately.

For the picture environment, set the unit to 1em and then divide it by 18. This enables us conveniently to use six units for the axes behind the circle of stars, because the specification says it must have a radius of $1/3$ of the height (ie $6/18$). The positioning argument was found by trial and error.

```
35  \newcommand{\makestars}{%
```

```
36    \color{PantoneYellow}%
37    \setlength{\unitlength}{1em}
38    \divide\unitlength by18
39    \begin{picture}(6,6)(-2,3.5)
40      \put(6,0){\eustar}
41      \put(5.196,3){\eustar}
42      \put(3,5.196){\eustar}
43      \put(0,6){\eustar}
44      \put(-3,5.196){\eustar}
45      \put(-5.196,3){\eustar}
46      \put(-6,0){\eustar}
47      \put(-5.196,-3){\eustar}
48      \put(-3,-5.196){\eustar}
49      \put(0,-6){\eustar}
50      \put(3,-5.196){\eustar}
51      \put(5.196,-3){\eustar}
52    \end{picture}%
53  }
```

The positioning of the individual stars was found with simple trigonometry. It would have been possible to construct this from a loop cycling through the 12 positions, but it is simpler to do it like this.

\euflag

EUF@baseline

Before the `\colorbox` is used, set the `\fboxsep` length to zero so that there is no border around the box, and then raise (lower) the box by the value of `\EUF@baseline` as set by the `baseline` option.

```
54  \newcommand{\euflag}[1][\EUF@baseline]{%
55    {%
56      \fboxsep0pt
57      \raisebox{#1}{%
58        \colorbox{PantoneReflexBlue}{%
```

The rectangle itself is formed from a `\vbox` 1em high and 1.5em wide. The paragraph skip and indent are zeroed to avoid unwanted space, and the content is centered and made yellow.

```
59          \vbox to1em{%
60            \hsize1.5em
61            \parskip0pt
62            \parindent0pt
63            \centering
64            \makestars
65            \vfill
```

Finally, close off the containing `\vbox` and other containers.

```
66          }% end vbox
67        }% end colorbox
```

```
68      }% end raisebox
69    }% end encapsulation
70  }% end command
```

That's it. Any problems, mail me.

References

Beccari, C. (2019). La bandiera europea e la sezione aurea. *Arstexnica, 27*. https://www.guitex.org/home/images/ArsTeXnica/AT027/BandieraEuropea.pdf

Council of Europe and European Commission. (2019). *Graphics guide to the European emblem: Interinstitutional style guide.* http://publications.europa.eu/code/en/en-5000100.htm

Haager, W. (2021). Flags of the world with TikZ: LaTeX PACKAGE. https://ctan.org/pkg/worldflags

Wikipedia contributors. (2024). Flag of Europe. In *Wikipedia.* San Francisco, CA, Wikimedia Foundation, Inc. Retrieved January 3, 2024, from https://en.wikipedia.org/wiki/Flag_of_Europe

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%%
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%% of this license or (at your option) any later version.
%% The latest version of this license is in
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%% and version 1.3 or later is part of all distributions of LaTeX
%% version 2005/12/01 or later.
%%
%% This work has the LPPL maintenance status `maintained'.
%%
%% The Current Maintainer of this work is M. Y. Name.
%%
```

```
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```

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Change History

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