

The `moderntimeline` package

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1 Introduction

As I was reworking my CV (which uses `moderncv`), the thought came to me that instead of just putting dates in front of each entries, it would be nice to have timelines to make them more graphical and get a better grasp of the time span of each entry.

After playing a bit, I asked a question on stackexchange.com¹ and adapted the answer provided by Jake² and turned it into this package.

2 Usage

This package is to be used together with the `moderncv` class, and can be loaded with:

```
\usepackage[firstyear=1999,lastyear=2012]{moderntimeline}
```

The `firstyear` and `lastyear` options indicate the maximum dates used to calibrate the time line. They are not mandatory and can be set later by means of the `\ltmaxdates` macro.

2.1 Settings

Before you typeset entries, you need to adjust the settings for this package.

<code>\tlwidth</code>	You can optionally set the width of the time line by calling <code>\tlwidth</code> with a dimension.
<code>\tlrunningwidth</code>	For each entry, a running line is traced behind the time line. You can set the width of this line by means of the <code>\tlrunningwidth</code> macro.
<code>\tlrunningcolor</code>	To set the color of the running line placed behind the time line, you can use the <code>\tlrunningcolor</code> macro.
<code>\tltextstart</code>	If you wish to set the size of the start date label, you can do so by using

¹<http://tex.stackexchange.com/questions/29725/putting-a-timeline-for-dates-in-moderncv>

²<http://tex.stackexchange.com/users/2552/jake>

`\tltextstart`, passing it a text size macro.

It also takes an optional first argument to set the position of the label, for example if you wish to center the label on the start of the line and set the text size to `\scriptsize`:

```
\tltextstart[base]{\scriptsize}
```

`\tltextend` If you wish to set the size of the end date label, you can do so by using `\tltextend`, passing it a text size macro.

It also takes an optional first argument to set the position of the label, for example if you wish to center the label on the start of the line and set the text size to `\scriptsize`:

```
\tltextend[base]{\scriptsize}
```

`\tltextsingle` If you wish to set the size of single date labels, you can do so by using `\tltextsingle`, passing it a text size macro.

For example if you wish to set the text size to `\scriptsize`:

```
\tltextsingle{\scriptsize}
```

`\tltext` You can set the sizes of both the start and end dates by calling the `\tltext` macro with a text size macro.

`\tlmaxdates` Before you can typeset any entry, you need to specify the maximal range of dates which will serve as a reference. This range will be mapped to the width of the left column, and dates will be positioned accordingly. To set the range, use the `\tlmaxdates` macro, passing it the first and last dates you will be using:

```
\tlmaxdates{1999}{2012}
```

If you are going to use the last date of the range as a start date or a unique date for an entry, you should probably set the max date a bit higher to prevent the date label from overflowing into the entry text.

Since version 0.4, you can set these dates by passing the `firstyear` and `lastyear` options to the package.

`\tlsince` When using a date range without an end year, you might want to add "Since" in front of the starting year. In order to do this, you can use the `\tlsince` macro:

```
\tlsince{Since~}
```

2.2 CV entries

This package provides new CV entry commands for the `moderncv` class. They are described in this section.

`\tlcventry` The `\tlcventry` macro lets you typeset a date range. In addition to the standard CV entry, one option and two mandatory arguments are added:

```
\tlcventry{1999}{2002}{WYSIWYG User}{Unnamed Company}
  {Somewhere}{}{Tried hard to typeset documents}
\tlcventry[blue]{2002}{0}{Happy TeXnician}{Any Company}
  {Anywhere}{}{Achieved nice typography and shared code with friends}
```

The option sets the color of the time line. If unset, the color defaults to the theme color of the CV.

The two arguments added in the beginning of the call are the start and end dates for the entry. If the position is still held, use 0 as the end date. This will add a gradient at the end of the time line.

`\tllabelcventry` The `\tllabelcventry` macro is similar to `\tlcventry`, but it takes yet a third additional argument, which lets you set a label for the time line. When this is used, the dates are not typeset around the time line, only the label is placed where the start date would normally be.

This is useful when your dates contain month names, or if the time span is too short to properly typeset the dates above and under the time line:

```
\tllabelcventry[magenta]{2002}{2003}{July--November 2002}
  {Scribus Student}{GNU School}
  {The Internet}{}{Tried Scribus for a short while}
```

`\tlsetnotshadedfraction` If last year in `\tlcventry` and `\tllabelcventry` is 0, the bar is shaded. With this command you control the fraction of the bar that is not shaded (default = 0):

```
\tlsetnotshadedfraction{0.4} % The first 40% of the bar is not shaded
```

`\tldatecventry` Positions usually last long enough to draw time lines, but there are also punctual entries, such as diplomas. The `\tldatecventry` lets to typeset unique dates. It places a bullet on the date and typesets the date above it:

```
\tldatecventry[brown]{2011}{Trusted TeX.SX user}{}{tex.stackexchange.com}
  {The Internet}{}{Achived 20k reputation on TeX.SX}
```

`\tldatelabelcventry` Similarly to `\tllabelcventry`, you might want to place a label on a unique date entry, such as an exact date or a month. The `\tldatelabelcventry` provides a parameter to achive this:

```
\tldatelabelcventry[brown]{2011}{Christmas 2011}{Happy TeXer}{}{Home}
  {Townville}{}{Received Don Knuth's \emph{3:16} as a gift.}
```

3 Implementation

```
1 \ProvidesPackage{moderntimeline}
2 \RequirePackage{tikz}
3 \RequirePackage{kvoptions}
4 \SetupKeyvalOptions{
5   family=moderntimeline,
6   prefix=tl@,
7 }
8 \DeclareStringOption{firstyear}
9 \DeclareStringOption{lastyear}
10 \ProcessKeyvalOptions*

\tlwidth
11 \newcommand{\tlwidth}[1]{%
12   \def\tl@width{#1}
13   \pgfmathsetmacro\tl@textstartabove{\tl@width+1pt}
14 }

\tlrunningwidth
15 \newcommand{\tlrunningwidth}[1]{%
16   \def\tl@runningwidth{#1}
17 }

\tlrunningcolor
18 \newcommand{\tlrunningcolor}[1]{%
19   \def\tl@runningcolor{#1}
20 }

\tlsince
21 \newcommand{\tlsince}[1]{%
22   \def\tl@since{#1}
23 }

\tlsetnotshadedfraction
24 \newcommand{\tlsetnotshadedfraction}[1]{%
25   \def\tl@nsfrac{#1}
26 }
27 \tlsetnotshadedfraction{0}

\tltextstart
28 \newcommand{\tltextstart}[2][base west]{%
29   \tikzset{
30     tl@startyear/.style={
31       font=#2,
32       name=tl@startyear,
33       above=\tl@textstartabove,
34       inner xsep=0pt,
35       anchor=#1,
```

```

36     }
37   }
38 }

\tltextend
39 \newcommand{\tltextend}[2][north east]{%
40   \tikzset{
41     tl@endyear/.style={
42       font=#2,
43       name=tl@endyear,
44       below,
45       inner xsep=0pt,
46       anchor=#1,
47     }
48   }
49 }

\tltextsingle
50 \newcommand{\tltextsingle}[1]{%
51   \tikzset{
52     tl@singleyear/.style={
53       font=#1,
54       name=tl@singleyear,
55       above=1pt,
56       inner xsep=0pt,
57     }
58   }
59 }

\tltext
60 \newcommand{\tltext}[1]{%
61   \tltextstart{#1}%
62   \tltextend{#1}%
63   \tltextsingle{#1}%
64 }

    Defaults
65 \tltext{\scriptsize}
66 \tlwidth{0.8ex}
67 \tlrunningwidth{0.05ex}
68 \tlrunningcolor{gray}
69 \tlsince{

\tlmaxdates
70 \newcommand{\tlmaxdates}[2]{%
71   \def\tl@firstyear{#1}
72   \def\tl@lastyear{#2}
73   \pgfmathsetmacro\tl@yearrange{\tl@lastyear-\tl@firstyear}
74 }

```

`\tldatelabelcventry`

```
75 \newcommand{\tldatelabelcventry}[8][color1]{%
76 \pgfmathsetmacro\tl@endyear{\tl@lastyear}
77 \pgfmathsetmacro\tl@startfraction{(#2-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
78 \pgfmathsetmacro\tl@endfraction{(\tl@endyear-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
79 \cventry{\tikz{
80   \fill [\tl@runningcolor] (0,0)
81     rectangle (\hintscolumnwidth,\tl@runningwidth);
82   \fill [#1] (0,0)
83     ++(\tl@startfraction*\hintscolumnwidth,0pt)
84     node [tl@startyear] {#3}
85     node {$\bullet$};
86   }
87 }
88 {#4}{#5}{#6}{#7}{#8}
89 }
```

`\tldatecventry`

```
90 \newcommand{\tldatecventry}[7][color1]{%
91 \pgfmathsetmacro\tl@endyear{\tl@lastyear}%
92 \pgfmathsetmacro\tl@startfraction{(#2-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
93 \pgfmathsetmacro\tl@endfraction{(\tl@endyear-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
94 \cventry{\tikz[baseline=0pt]{
95   \useasboundingbox (0,-1.5ex) rectangle (\hintscolumnwidth,1ex);
96   \fill [\tl@runningcolor] (0,0)
97     rectangle (\hintscolumnwidth,\tl@runningwidth);
98   \fill [#1] (0,0)
99     ++(\tl@startfraction*\hintscolumnwidth,0pt)
100    node [tl@singleyear] {#2}
101    node {$\bullet$};
102 }%
103 }%
104 {#3}{#4}{#5}{#6}{#7}%
105 }
```

`\tlcventry`

```
106 \newcommand{\tlcventry}[8][color1]{%
107 \pgfmathsetmacro\tl@endyear{ifthenelse(#3==0,\tl@lastyear,#3)}%
108 \pgfmathsetmacro\tl@startfraction{(#2-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
109 \pgfmathsetmacro\tl@endfraction{(\tl@endyear-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
110 \pgfmathsetlength{\pgf@xa}{#3} \ifdim\pgf@xa=0pt
111 \def\tl@startlabel{\tl@since #2} \else \def\tl@startlabel{#2} \fi
112 \cventry{\tikz[baseline=0pt]{
113   \useasboundingbox (0,-1.5ex) rectangle (\hintscolumnwidth,1ex);
114   \fill [\tl@runningcolor] (0,0)
115     rectangle (\hintscolumnwidth,\tl@runningwidth);
116   \fill [#1] (0,0)
117     ++(\tl@startfraction*\hintscolumnwidth,0pt)
```

```

118     node [tl@startyear] {\tl@startlabel}
119     rectangle (\tl@endfraction*\hintscolumnwidth,\tl@width-1pt)
120     node [tl@endyear] {\pgfmathparse{ifthenelse(#3==0,,#3)}\pgfmathresult}
121     (\hintscolumnwidth,0pt) ;
122     \pgfmathsetlength{\pgf@xa}{#3} \ifdim\pgf@xa=0pt
123     \newdimen\fullcolorwidth
124     \pgfmathsetlength\fullcolorwidth{\tl@startfraction*(1+(1-\tl@startfraction)*\tl@nsfrac)*
125     \shade [left color=#1,right color=#1]
126 (\tl@startfraction*\hintscolumnwidth,0)
127     rectangle (\fullcolorwidth,\tl@width);
128     \shade [left color=#1] (\fullcolorwidth,0)
129     rectangle (\tl@endfraction*\hintscolumnwidth,\tl@width);
130     \else
131     \fill [#1] (\tl@startfraction*\hintscolumnwidth,0)
132     rectangle (\tl@endfraction*\hintscolumnwidth,\tl@width);
133     \fi
134     }%
135 }%
136 {#4}{#5}{#6}{#7}{#8}%
137 }

```

`\tllabelcventry`

```

138 \newcommand{\tllabelcventry}[9][color1]{%
139 \pgfmathsetmacro\tl@endyear{ifthenelse(#3==0,\tl@lastyear,#3)}
140 \pgfmathsetmacro\tl@startfraction{(#2-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
141 \pgfmathsetmacro\tl@endfraction{(\tl@endyear-\tl@firstyear)/(\tl@lastyear-\tl@firstyear)}%
142 \cventry{\tikz[baseline=0pt]{
143     \fill [\tl@runningcolor] (0,0)
144     rectangle (\hintscolumnwidth,\tl@runningwidth);
145     \useasboundingbox (0,-1.5ex)
146     rectangle (\hintscolumnwidth,1ex);
147     \fill [#1] (0,0)
148     ++(\tl@startfraction*\hintscolumnwidth,0pt)
149     node [tl@startyear] {#4}
150     rectangle (\tl@endfraction*\hintscolumnwidth,\tl@width-1pt);
151     \pgfmathsetlength{\pgf@xa}{#3} \ifdim\pgf@xa=0pt
152     \newdimen\fullcolorwidth
153     \pgfmathsetlength\fullcolorwidth{\tl@startfraction*(1+(1-\tl@startfraction)*\tl@nsfrac)*
154     \shade [left color=#1,right color=#1]
155 (\tl@startfraction*\hintscolumnwidth,0)
156     rectangle (\fullcolorwidth,\tl@width);
157     \shade [left color=#1] (\fullcolorwidth,0)
158     rectangle (\tl@endfraction*\hintscolumnwidth,\tl@width);
159     \else
160     \fill [#1] (\tl@startfraction*\hintscolumnwidth,0)
161     rectangle (\tl@endfraction*\hintscolumnwidth,\tl@width);
162     \fi
163     }
164 }

```

165 `{#5}{#6}{#7}{#8}{#9}%`
 166 `}`

Change History

0.1		textsingle, thanks to Stphane Dupille
General: Initial release	1	1
0.2	0.6	
General: Add tlsince and options for tltext*	1	General: Fix compatibility with moderncv 0.15.1
0.3	0.7	
General: Bugfix: initialize tlsince	1	General: Various fixes by Jake to allow fractional years in tlabelcventry
0.4		
General: Add firstyear and lastyear options	1	0.8
0.5		General: Add the tlsetnotshadedfraction command, thanks to Stefano Gronchi
General: Fix positions in tlcventry and tldatecventry, add tl-		1

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