

# L<sup>A</sup>T<sub>E</sub>X style file for drawing horizontal timelines

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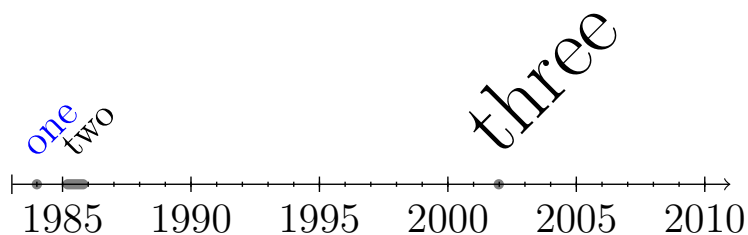
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# 1 User documentation

This package defines the new environment `chronology`. This environment contains `\event` commands.

## 1.1 Example 1

This output:

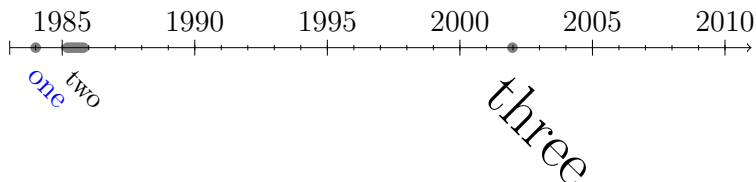


is produced by this input:

```
\begin{chronology}[5]{1983}{2010}{10cm}[7cm]
  \event{1984}{\color{blue}{one}}
  \event[1985]{1986}{\small{two}}
  \event{\decimaldate{25}{12}{2001}}{\huge{three}}
\end{chronology}
```

## 1.2 Example 2

Similarly, this output:

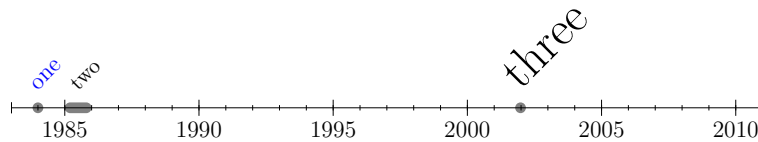


Is produced by this input:

```
\begin{chronology}*[5]{1983}{2010}{10cm}
  \event{1984}{\color{blue}{one}}
  \event[1985]{1986}{\small{two}}
  \event{\decimaldate{25}{12}{2001}}{\huge{three}}
\end{chronology}
```

### 1.3 Example 3

And finally, this output:



is produced by this input:

```
\begin{chronology}[5]{1983}{2010}{10cm}[13cm]
  \event{1984}{\color{blue}{one}}
  \event[1985]{1986}{\small{two}}
  \event{\decimaldate{25}{12}{2001}}{\huge{three}}
\end{chronology}
```

## 2 Package macros

### 2.1 Standard package loading

```
1 \NeedsTeXFormat{LaTeX2e}%  
2 \ProvidesPackage{chronology}[2015/03/27 v1.1.1 Horizontal timeline]%  
3 \RequirePackage{calc}%  
4 \RequirePackage{tikz}%  
5 \RequirePackage{xparse}%
```

### 2.2 Defining counters and lengths

```
6 \newcounter{step}\newcounter{stepstart}\newcounter{stepstop}%  
7 \newcounter{yearstart}\newcounter{yearstop}\newcounter{deltayears}%  
8 \newlength{\xstart}\newlength{\xstop}%  
9 \newlength{\distanceunit}\newlength{\timelinewidth}%  
10 \newsavebox{\timelinebox}%
```

### 2.3 Defining TikZ styles for labels and events

```
11 \tikzset{%  
12   ,chronevent/.style={fill=black,draw=none,opacity=0.5}  
13   ,chronlabel/.style={opacity=1}  
14   ,chrontickslabel/.style={chronlabel}  
15   ,chroneventlabel/.style={chronlabel}  
16   ,eventlabel/.style={chroneventlabel,anchor=south  
17     west,yshift=.2\distanceunit,rotate=45}  
18   ,flippedeventlabel/.style={chroneventlabel,anchor=north  
19     west,yshift=-.2\distanceunit,rotate=-45}  
20 }
```

#### 2.3.1 For compatibility with babel. Handling of active characters in TikZ

```
21 \tikzset{%  
22   handle active characters in code,  
23   handle active characters in nodes  
24 }
```

### 2.4 The chronology environment macros

chronology (*env.*)

```
25 \newif\ifchronology@star%
```

```

26 \newenvironment{chronology}{%
27   \@ifstar{\chronology@startrue\chronology@i*}{\chronology@starfalse\chronology@i*}%
28 }{%
29   \end{tikzpicture}%
30   \end{lrbox}%
31   \raisebox{2ex}{\resizebox{\timelinewidth}{!}{\usebox{\timelinebox}}}%
32 }%

```

### 2.4.1 Starred and unstarred forms and arguments

\chronology@i

```

33 \def\chronology@i*{%
34   \@ifnextchar[{\chronology@ii*}{\chronology@ii*[{5}]}%
35 }%

```

\chronology@ii

```

36 \def\chronology@ii*[#1]#2#3#4{%
37   \@ifnextchar[{\chronology@iii*[{#1}]{#2}{#3}{#4}}
38     {\chronology@iii*[{#1}]{#2}{#3}{#4}[{#4}]}%
39 }%

```

\chronology@iii

```

40 \def\chronology@iii*[#1]#2#3#4[#5]{%
41   \newif\ifflipped%
42   \ifchronology@star%
43     \flippedtrue%
44   \else%
45     \flippedfalse%
46   \fi%
47 %
48   \setcounter{step}{#1}%
49   \setcounter{yearstart}{#2}\setcounter{yearstop}{#3}%
50   \setcounter{deltayears}{\theyearstop-\theyearstart}%
51   \setlength{\distanceunit}{#5/\thedeltayears}%
52   \setlength{\timelinewidth}{#4}%
53   \pgfmathsetcounter{stepstart}{\theyearstart+\thestep-mod(\theyearstart,\thestep)}%
54   \pgfmathsetcounter{stepstop}{\theyearstop-mod(\theyearstop,\thestep)}%
55   \addtocounter{step}{\thestepstart}%
56 %
57   \begin{lrbox}{\timelinebox}%

```

```

58 \begin{tikzpicture}[baseline={current bounding box.north}]]%
59 \draw [|->] (0,0) -- (\thedeltayears*\distanceunit+\distanceunit, 0);%
60 %
61 \foreach \x in {1,...,\thedeltayears}%
62 \draw[xshift=\x*\distanceunit] (0,-.1\distanceunit) --
63 (0,.1\distanceunit);%
64 \addtocounter{deltayears}{1}%
65 %
66 \foreach \x in {\thestepstart,\thestep,...,\thestepstop}{%
67 \pgfmathsetlength\xstop{(\x-\theyearstart)*\distanceunit}%
68 \draw[xshift=\xstop] (0,-.3\distanceunit) -- (0,.3\distanceunit);%
69 \ifflipped%
70 \node[chrontickslabel] at (\xstop,0) [above=.2\distanceunit] {\x};%
71 \else%
72 \node[chrontickslabel] at (\xstop,0) [below=.2\distanceunit] {\x};%
73 \fi%
74 }%
75 }%

```

\event

```

76 \DeclareDocumentCommand \event {o m m}{%
77 \pgfmathsetlength\xstop{(#2-\theyearstart)*\distanceunit}%
78 \IfNoValueTF {#1} {%
79 \ifflipped%
80 \draw[chronevent]%
81 (\xstop, 0) circle (.2\distanceunit)%
82 node[flippedeventlabel] {#3};%
83 \else%
84 \draw[chronevent]%
85 (\xstop, 0) circle (.2\distanceunit)%
86 node[eventlabel] {#3};%
87 \fi%
88 }{%
89 \pgfmathsetlength\xstart{(#1-\theyearstart)*\distanceunit}%
90 \ifflipped%
91 \draw[chronevent,rounded corners=.2\distanceunit]%
92 (\xstart,-.2\distanceunit) rectangle%
93 node[flippedeventlabel] {#3} (\xstop,.2\distanceunit);%
94 \else%
95 \draw[chronevent,rounded corners=.2\distanceunit]%

```

```

96      (\xstart,-.2\distanceunit) rectangle%
97      node[eventlabel] {#3} (\xstop,.2\distanceunit);%
98      \fi%
99    }%
100 }

```

`\decimaldate`

```

101 \newcommand{\decimaldate}[3]{(#1-1)/31/12+(#2-1)/12+#3}%

```

### 3 Changelog

**2023-08-08** Dominik forked the lwiseman/chronology GitHub repo and set up this documentation;

**2023-08-08** Dominik merged the changes of Alexander Klemm of 2022-12-19 that “Rename variable ‘unit’ to ‘distanceunit’ (for compatibility with package: siunitx)” into the wujastyk branch

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