

# timeline Package

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## Abstract

The **timeline** package provides an easy interface to create and maintain timelines. Its macros utilise the **tikzenvironment** and commands from the **pgf** package. The date granularity for entries on a timebar is year and month.

## 1 License

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## 2 Environment options

The environment **timeline** has five optional arguments:

```
1 \begin{timeline}  
2   [{\langle InnerBackgroundColor \rangle}]  
3   [{\langle InnerForegroundColor \rangle}]  
4   [{\langle OuterBackgroundColor \rangle}]  
5   [{\langle OuterForegroundColor \rangle}]  
6   [{\langle ConnectorColor \rangle}]
```

They define the respective color for the events on the timeline. Default settings are some orange ■ with black text for the inner part and some blueish ■ with white text for the outer part. If the fifth parameter for the connector color is not specified, then the  $\langle InnerBackgroundColor \rangle$  will be used instead. Feel free to change the colours via the parameters.

## 3 Commands

Inside the **timeline** environment one can use the following commands.

**Add a timebar** This is done via the 6-parameter command

```
1 \timebar{\langle startsymbol \rangle}  
2   {\langle startXcoordinate \rangle}  
3   {\langle fromYear \rangle}  
4   {\langle toYear \rangle}  
5   {\langle stepLength \rangle}  
6   {\langle endSymbol \rangle}
```

$\langle startSymbol \rangle$  can be any symbol one could put on the left side of ‘-’ at `\draw[-]` in the `tikz`-command.  
 $\langle startXcoordinate \rangle$  is the  $x$ -coordinate.  $y$  is always considered to be 0.  
 $\langle fromYear \rangle$  is in YYYY.  
 $\langle toYear \rangle$  is in YYYY.  
 $\langle stepLength \rangle$  is the length of one year on the timebar.  
 $\langle endSymbol \rangle$  can be any symbol one could put on the right side of ‘-’ at `\draw[-]` in the `tikz`-command.

**Add a crunched bar part.** Used to literally skip some parts in the timebar where nothing happens. Drawn via the command

```
1 \zigzag{\xStartCoordinate}
```

$\langle xStartCoordinate \rangle$  is the  $x$ -coordinate where it should start. Usually, when using this command, one has to calculate the  $x$ -coordinate by hand from what was executed before. Then length of the zigzag is 0.4.

**Entries.** An entry has four possible commands, depending on whether it should appear above, below, shifted above, or shifted below. For the unshifted versions the following commands are used.

```
1 \entry{\year}{\what}{\who}
2 \flipentry{\year}{\what}{\who}
```

$\langle year \rangle$  is YYYY or YYYY-MM which has to exist on the timebar. Such labels are automatically created in the process of executing a `timebar`-command. More precisely, you have to execute a `timebar`-command with  $\langle fromYear \rangle$  as  $Y_1$  and  $\langle toYear \rangle$  as  $Y_2$  and then can use an `entry`/`flipentry`/`entryshift`/`flipentryshift`-command with  $\langle year \rangle$  which has to be between  $Y_1$  and  $Y_2$ . Otherwise it will create a missing label error.

$\langle what \rangle$  is the content of the inner (near the timebar) box.

$\langle who \rangle$  is the content of the outer box.

```
1 \entryshift{\year}{\what}{\who}{\distance}
2 \flipentryshift{\year}{\what}{\who}{\distance}
```

$\langle distance \rangle$  is the length (often specified in mm) which shifts the entry to the right (in direction of the  $x$ -coordinate).

Regarding all entries, the ‘minimum height’ of a node is automatically set to

$$\max\{\text{height of } \langle who \rangle, \text{height of } \langle what \rangle\} + 1.5\text{mm}$$

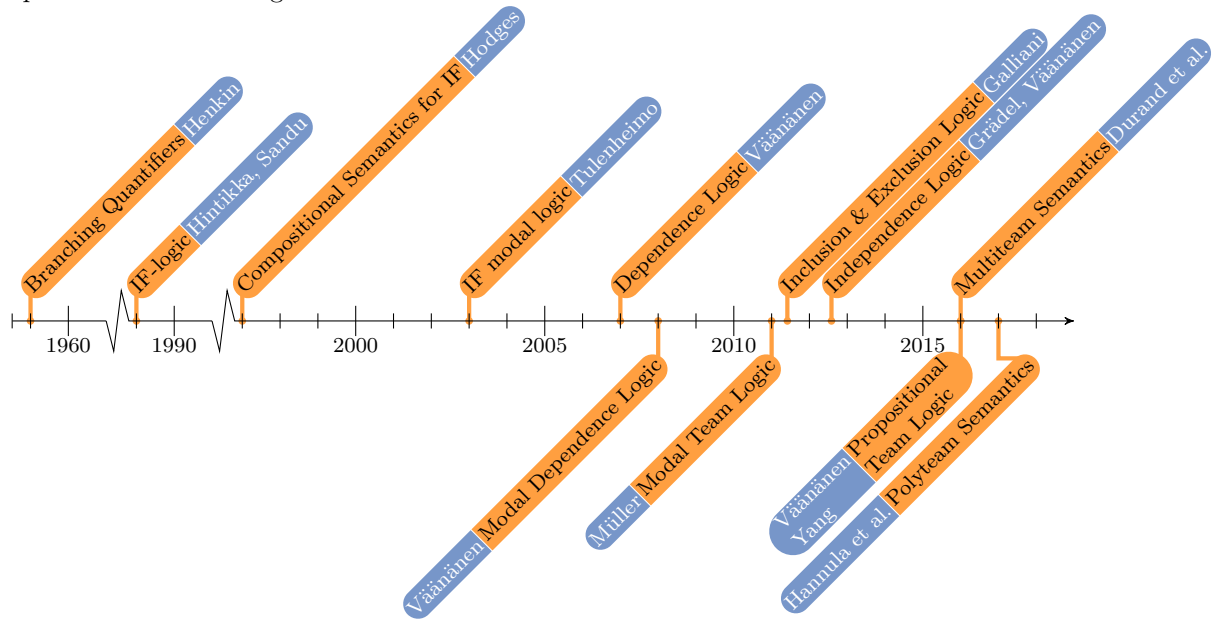
that is, the maximum of the font heights of the  $\langle who \rangle$ - and  $\langle what \rangle$ -values plus an inner sep of 1.5 mm.

## 4 Example

A small example is provided to demonstrate the commands:

```
1 \begin{timeline}
2   \timebar{}{0}{1959}{1960}{.5}{}
3   \zigzag{1}
4   \entry{1959}{Branching Quantifiers}{Henkin}
5
6   \timebar{}{1.4}{1989}{1990}{.5}{}
7   \zigzag{2.4}
8   \entry{1989}{IF-logic}{Hintikka, Sandu}
9
10  \timebar{}{2.8}{1997}{2018}{.5}{stealth}
11  \entry{1997}{Compositional Semantics for IF}{Hodges}
12  \entry{2003}{IF modal logic}{Tulenheimo}
13  \entry{2007}{Dependence Logic}{Väänänen}
14  \flipentry{2008}{Modal Dependence Logic}{Väänänen}
15  \entry{2011-6}{Inclusion \& Exclusion Logic}{Galliani}
16  \entry{2012-8}{Independence Logic}{Grädel, Väänänen}
17  \flipentry{2011}{Modal Team Logic}{Müller}
18  \entry{2016}{Multiteam Semantics}{Durand et al.}
19  \flipentry{2016}{Propositional Team Logic}{Väänänen Yang}
20  \flipentryshift{2017}{Polyteam Semantics}{Hannula et al.}{3mm}
21 \end{timeline}
```

and produces the following timeline:



## 5 Acknowledgements

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