

The Ticking Digital Clock `tdclock` package v2.0

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1 The package

The `tdclock` package is a \LaTeX 2e package that allows the users to insert into a \LaTeX generated pdf document a ticking digital clock showing the date and/or time at the moment in which the document is being read, for example the one next:

The package is loaded by `\usepackage[‘‘options’’]{tdclock}`

Options:

- `timeinterval= n`

n can be any positive integer. The clock will update its internal status every n seconds. Thus, if we load the package with `[timeinterval=120]`, the clock will update its display every 2 minutes. The default time interval is set to 29 seconds.

Note that for low values of n the memory used by Adobe increases during the time the document remains opened and can become very high. Then, values of n below 10 are not recommended.

- `font=“adobe font”`

“adobe font” is one of the following 9 adobe name fonts:

Helv	HelvI	HelvBI	Times	TimesI	TimesBI
Cour	CourI	CourBI			

By now no other fonts, like \TeX ones, can be used. This restriction comes from the fact that the “dynamic” clock is based on javascript code embedded into the pdf document.

2 Restrictions—requirements

The package requires `hyperref`, `xkeyval` and `xcolor` packages. It works with PDF \LaTeX as well as with $\LaTeX \rightarrow \text{DviPs} \rightarrow \text{Ps2pdf}$ sequence. In documents generated by `Dvipdfm`, the clock does not work properly.

Since it uses javascript code, and not all pdf readers can interpret javascript, only some of them will display the documents properly. We have tested the package with Adobe reader and Adobe acrobat under windows and Linux.

3 Installation

Copy the package file `tdclock.sty` to a directory where \LaTeX can find it.

4 Getting the package

The package can be downloaded at <http://pcmap.unizar.es/numerico/software>

5 Macros

The clock must be initialized with `\initclock`, usually at the beginning of the document, after `\begin{document}`.

The following macros display dynamically the current date and/or time:

command	action
<code>\tdclock</code>	displays a complete clock
<code>\tdtime</code>	displays the current time
<code>\tddate</code>	displays the current date
<code>\tdday</code>	displays the current day
<code>\tdmonth</code>	displays the current month
<code>\tdyear</code>	displays the current year
<code>\tdhours</code>	displays the current hour
<code>\tdminutes</code>	displays the current minute
<code>\tdseconds</code>	displays the current second

The package also provides macros to display a stopwatch. This can be done by means of the following macros:

command	action
<code>\crono</code>	displays a stopwatch
<code>\cronohours</code>	displays a crono (only hours)
<code>\cronominutes</code>	displays a crono (only minutes)
<code>\cronoseconds</code>	displays a crono (only seconds)

In addition, the package includes two macros that display buttons. With one of them, by pressing it, you reset the stopwatch to zero values. The form of the command is `\resetcrono{‘‘button’’}`. For example, `\resetcrono{\fbox{reset}}` `\crono` produces (press the button to see what happens): reset

The other lets you toggle from current time to stopwatch. For example, `\toggleclock{\fbox{toggleclock}}` `\tdtime` produces (press the button to see what happens): toggle .

Note that `\toggleclock` only has effect on `\tdtime` command, and not on `\crono`.

5.1 Formatting the output

5.1.1 Size and color

The size and color of the characters forming the time or date are the \LaTeX current font size and color. Thus, for example

`\centerline{\textcolor{blue}{\Huge \tdclock}}` gives:

There is another macro, `\factorclockfont{‘‘factor’’}`, that increases the size of the clock by a desired factor. To set the size of the clock to its original size, use `\factorclockfont{1}`

5.1.2 Formatting the display

There are two commands that change the effect of `\time` and `\crono`.

- `\hhmmss` redefine the commands to show the hours, minutes and seconds (this is the default),
- `\hhmm` redefine them so that they will only show hours and minutes.

Hours, minutes and seconds are separated by the character defined in the macro `\timeseparator`. Therefore, the time separator can be set by redefining this macro. For example,

`\renewcommand{\timeseparator}{;} \tdtime`
gives

; ;

Different types of formats for time can be achieved by means of the macros `\tdhours`, `\tdminutes` and `\tdseconds`. For example, `\minutes.\seconds` produces: .

Different types of formats for the stopwatch can be achieved by means of the macros `\cronohours`, `\cronominutes` and `\cronoseconds`. For example, `\cronominutes.\cronoseconds` produces: .

In fact, `\tdtime` and `\crono` are defined by default to `\tdhours\timeseparator\tdminutes\timeseparator\tdseconds`

and

`\cronohours\timeseparator\cronominutes\timeseparator\cronoseconds`
respectively.

Regarding the date, there are two commands that change the effect of `\tddate`.

- `\ddmmyyyy` redefine the command to show the day, month and year (this is the default),
- `\mmdyyy` redefine it to show month, day and year.

Day, month and year are separated by the character defined in the macro `\dateseparator`. Therefore, the date separator can be set by redefining this macro. For example,

```
\renewcommand{\dateseparator}{;} \tddate
```

gives

;

Different types of formats for date can be achieved by means of the macros `\tdday`, `\tdmonth` and `\tdyear`. For example, `\day-month` produces:

By default, `\tddate` is defined by default to `\tdday\dateseparator\tdmonth\dateseparator\tdyear`.

Since the font used to display the dynamic date and time is one of the adobe fonts, we have included two commands `\pdfslash` and `\pdfcolon` to provide the characters “slash” and “colon” so that defining `\renewcommand{\timeseparator}{\pdfcolon}` the command `\tdtime` will have all their characters in the same font. The same for `\tddate` if we use `\pdfslash` as separator.

6 Summary of macros

Time-Date macros

macro	result	action
<code>\initclock</code>		initialize clock
<code>\tdclock</code>		complete clock
<code>\tdtime</code>		current time
<code>\tddate</code>		current date
<code>\tdday</code>		current day
<code>\tdmonth</code>		current month
<code>\tdyear</code>		current year
<code>\tdhours</code>		current hours
<code>\tdminutes</code>		current minutes
<code>\tdseconds</code>		current seconds
<code>\crono</code>		stopwatch
<code>\cronohours</code>		crono hours
<code>\cronominutes</code>		crono minutes
<code>\cronoseconds</code>		crono seconds
<code>\resetcrono{"button"}</code>	<code>reset</code>	sets crono time to zero
<code>\toggleclock{"button"}</code>	<code>toggle</code>	toggle time-crono

Formatting macros

<code>\hhmm\tdtime</code>	
<code>\hhmmss\tdtime</code>	
<code>\mddyy\tddate</code>	
<code>\ddmmyy\tddate</code>	
<code>\renewcommand{\dateseparator}{--}\tddate</code>	- -
<code>\renewcommand{\timeseparator}{.}\tdtime</code>	. .
<code>\pdfslash</code>	
<code>\pdfcolon</code>	
<code>\factorclockfont{2.0}\tdtime</code>	