The Ticking Digital Clock tdclock package v2.0

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1 The package

The tdclock package is a LaTeX2e 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 PDFIATEX as well as with IATEX DviPs 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 $\mbox{\sc IAT}_{\mbox{\footnotesize E\!Y}}\mbox{\sc Z}$ 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
\tdclock	displays a complete clock
\tdtime	displays the current time
\tddate	displays the current date
\tdday	displays the current day
\tdmonth	displays the current month
\tdyear	displays the current year
\tdhours	displays the current hour
\tdminutes	displays the current minute
\tdseconds	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
\crono	displays a stopwatch
\cronohours	displays a crono (only hours)
\cronominutes	displays a crono (only minutes)
\cronoseconds	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, $\toggleclock{\toggleclock}} \toggleclock{\toggleclock} .$

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,

Different types of formats for time can be achieved by means of the macros \tdhours, \tdminutes and \seconds. 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

 $\verb|\cronohours| timeseparator| cronominutes| timeseparator| cronoseconds| respectively.$

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),
- \mmddyyyy 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,

```
\label{lem:command} $$\operatorname{\dateseparator}_{;} \date $$ 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	
\initclock		initialize clock	
\tdclock		complete clock	
\tdtime		current time	
\tddate		current date	
\tdday		current day	
\tdmonth		current month	
\tdyear		current year	
\tdhours		current hours	
\tdminutes	current minutes		
\tdseconds		current seconds	
\crono		stopwatch	
\cronohours		crono hours	
\cronominutes		crono minutes	
\cronoseconds		crono seconds	
\resetcrono{"button"}	reset	sets crono time to zero	
\toggleclock{"button"}	toggle	toggle time-crono	

Formatting macros

I offine time in a constant			
\hhmm\tdtime			
\hhmmss\tdtime			
\mmddyy\tddate			
\ddmmyy\tddate			
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $			
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $			
\pdfslash			
\pdfcolon			
\factorclockfont{2.0}\tdtime			