

The ‘grverb’ package

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1 Introduction

One major drawback of the `greek` option of the `babel` package is that one cannot easily write both Latin and Greek verbatim text. This is particularly useful for computer listings and, more generally, in computer science related texts. This package solves this problem by introducing the environment `grverbatim` and the command `grverb` whose functionality is identical to the functionality of the corresponding standards. A public domain font is used by both the command and the environment. The font conforms to the ISO-8859-7 encoding for the Greek language..

2 The code

The first thing we do is to identify the package.

```
1 <*package>
2 \NeedsTeXFormat{LaTeX2e}[1996/01/01]
3 \ProvidesPackage{grverb}[1999/12/06\space v1.0]
4 \typeout{Package: ‘grverb’ v1.0\space <1999/12/06> (A. Syropoulos)}
```

Since, we are going to use most characters with slot numbers above 127, we need a macro to assign to a range of characters catcode 11 (letter). The following macro is a modified version of macro `\inpenc@loop` which is defined in the package `inputenc`.

```
\@gr@inpenc@loop
5 \def\@gr@inpenc@loop#1#2{%
6   \@tempcnta'#1\relax
7   \loop
8     \catcode\@tempcnta11
```

```

9 \ifnum\@tempcnta<#2\relax
10 \advance\@tempcnta\@ne
11 \repeat}

```

The package uses the (public domain) font “Greek-CourierPlain” as the default verbatim font. Since, this font is not known to the NFSS, we need to write down the necessary definitions. We introduce a new family and since the design size of the new verbatim font is slightly larger than that of the cb fonts (i.e., the standart fonts used with the `greek` option of the `babel` package), we need to shrink a little bit the character size so that they match with the rest of the text.

```

12 \DeclareFontFamily{U}{grtt}{-}
13 \DeclareFontShape{U}{grtt}{m}{n}{-}
14 <-> s * [0.9] grcour8a}{-}

```

We now define the new environment. The code is actually derived from code which appears in the file `lrmiscen.dtx` in the standard $\text{\LaTeX}2\text{e}$ distribution. We define the new environment `grverbatim` which uses the new verbatim font, instead of the standard one, and which assigns to particular list of characters catcode 11. Note, that these changes are local, so not to affect the behavior of \LaTeX .

```

\grverbatim
\endgrverbatim
15 \begingroup \catcode '|=0 \catcode '['= 1
16 \catcode']=2 \catcode '\{=12 \catcode '\}=12
17 \catcode'\|=12 |gdef|@grxverbatim#1\end{grverbatim} [#1|end[grverbatim]]
18 |endgroup
19 \def\@grverbatim{\trivlist \item\relax
20 \if@minipage\else\vskip\parskip\fi
21 \leftskip\@totalleftmargin\rightskip\z@skip
22 \parindent\z@\parfillskip\@flushglue\parskip\z@skip
23 \@@par
24 \@tempswafalse
25 \def\par{%
26 \if@tempswa
27 \leavevmode \null \@@par\penalty\interlinepenalty
28 \else
29 \@tempwatrue
30 \ifhmode\@@par\penalty\interlinepenalty\fi
31 \fi}%
32 \let\do\@makeother \dospecials
33 \obeylines \gr@verbatim@font \@noligs
34 \everypar \expandafter{\the\everypar \unpenalty}%
35 }
36 \def\grverbatim{\begingroup\@gr@inpenc@loop\^^A\^^H%
37 \@gr@inpenc@loop\^^K\^^K%
38 \@gr@inpenc@loop\^^N\^^_%
39 \@gr@inpenc@loop\^^?\^^ff%
40 \@grverbatim \frenchspacing\@vobeyspaces \@grxverbatim}
41 \def\endgrverbatim{\if@newlist \leavevmode\fi\endtrivlist\endgroup}

```

We don't use the standard verbatim font, so we define a command to use the new verbatim font. This allows us to use the usual verbatim commands and environments without any problem.

```
\gr@verbatim@font
```

```
42 \def\gr@verbatim@font{\fontencoding{U}\fontfamily{grtt}\fontseries{m}%  
43 \selectfont}
```

The last thing we do is to define the new command `\grverb`. The command is actually a modified version of the `\verb` command. The new thing is that many non-letter characters become letters and we use the Greek verbatim font instead of the standard one.

```
\grverb
```

```
44 \def\grverb{\relax\ifmmode\hbox\else\leavevmode\null\fi  
45 \bgroup  
46 \@gr@inpenc@loop\^^A\^^H%  
47 \@gr@inpenc@loop\^^K\^^K%  
48 \@gr@inpenc@loop\^^N\^^_%  
49 \@gr@inpenc@loop\^^?\^^f%  
50 \verb@eol@error \let\do\@makeother \dospecials  
51 \gr@verbatim@font\@noligs \@verb}  
52 </package>
```

Acknowledgment

I thank Antonios Tsolomitis for bringing to my attention this particular problem and for testing the proposed solution.

Dedication

I would like to dedicate this piece of work to my son

Demetrios-Georgios.