

# Follow-Up to Last Month's Meeting

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# 1 Delayed Output Problem

Theresa Faus-Kessler had presented a problem where a `print()` or `cat()` would not be shown until after the routine would finish, as in

```
x <- 1:10

plot.with.legend <- function(x,y){
  plot(x,y)
  print('Click mouse in plot to place legend')
  xy <- locator(1)
  legend(xy$x, xy$y, 'Data')
}
plot.with.legend(x,x^2)
```

As it turned out, this is a problem specific to Windows and mentioned in the FAQs (<http://cran.r-project.org/bin/windows/base/rw-FAQ.html>):

### 6.3 When using Rgui the output to the console seems to be delayed.

This is deliberate: the console output is buffered and re-written in chunks to be faster and less distracting. You can turn buffering off or on from the 'Misc' menu or the right-click menu: `<Ctrl-W>` toggles the setting.

If you are sourcing R code or writing from a function, there is another option. A call to the R function `flush.console()` will write out the buffer and so update the console.

So, the following code works as expected under Windows

```
x <- 1:10

plot.with.legend <- function(x,y){
  plot(x,y)
  print('Click mouse in plot to place legend')
  flush.console()
  xy <- locator(1)
  legend(xy$x, xy$y, 'Data')
}
plot.with.legend(x,x^2)
```

To make it work independent of the OS, we can use

```
if(R.Version()$os == 'mingw32') flush.console()
```

## 2 Sweave

I like putting data that need to be present in both the R and  $\text{\LaTeX}$  parts of the document kept in R variables (I haven't found any other way to manage this). As some of this variables need to be set early (i. e., before the `\begin{document}` line), and to have a neatly organized document, I put an initialization block close to the top of the document as in

```
\documentclass[a4paper]{article}
\usepackage[german,american]{babel}
\usepackage{smallcap}
<<preinit,echo=FALSE,results=hide>>=
thisyear <- 2004
@
```

It appears, however, that Sweave has a bug that prevents it from emitting the

```
\usepackage{/usr/local/lib/R/share/texmf/Sweave}
```

line (argument may vary depending on OS), whenever an S Block is found before the `\begin{document}` line. (Friedrich Leisch has been informed)

As a work around I use the following in the meantime (you may have to adapt to your paths and OS). The Mac path depends on the R version installed, so it looks a bit more complicated than the linux (default) version in the `switch()` statement below.

```
<<preinit,echo=FALSE,results=hide>>=
thisyear <- 2004
RV <- R.Version()
sweave.base <- switch(RV$arch,
  'powerpc'= paste("/Library/Frameworks/R.framework",
    "/Versions/",
    paste(RV$major,RV$minor,sep='.'),
    "/Resources/",sep=''),
  '/usr/local/lib/R/'
)
@
\usepackage{\Sexpr{sweave.base}share/texmf/Sweave}
```