

LyX and Sweave under Windows XP

“Yes, we can!” ;-)

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Instructions for making Sweave work under Windows XP, using **Lyx 1.6.1** and **R-project 2.8.x**.

Adapted from the instructions provided by Paul Johnson and Cheng-shan (Frank) Liu:

(see <http://n2.nabble.com/Converter-failure-with-Sweave-td479669.html>)

These instructions correct some small problems that were impeding the original instructions from working under the recent version of R that I use. I also take into account the fact that the default installation folders of R and Lyx are under Program Files, a path that contains a space, and can cause problems.

We will suppose that Lyx 1.6.1 is installed in C:\Program Files\LyX16 and R in C:\Program Files\R\R-2.8.1 (their default folders under Windows).

1. Place `noweb.sty` and `sweave.sty` in a folder that can be found by your Latex installation (under `texmf-local` for example). You can download these files from CTAN.
2. Copy the content of the C:\Program Files\R\R-2.8.1\share\texmf folder in the previous folder or in another folder under your texmf tree.
3. Refresh the file catalogue of Latex (execute `mktexlsr` for TexLive in a Dos command box, for example). You can now check the placement of these files by executing `kpsewhich noweb.sty` in a Dos command box.
4. Reconfigure Lyx (go to Edit-> Reconfigure). Check if you have document class "article(noweb)" or "article(Sweave noweb)" (in Document-> Settings->Document class). If not, you will need to reinstall Lyx.
5. Create a batch script called "Rweave.bat" and put it in the folder "C:\Program Files\Lyx16\bin\". You can create this file using notepad or any other text editor (PSPad is a very nice and free one). The file should contain a one line instruction:

```
"C:\Program Files\R\R-2.8.1\bin\Rterm" --no-save --args "%1" < "C:/Program Files/LyX16/bin/MakeSweave.R" > "%1.log"
```

6. Create a R file "MakeSweave.R" with the following lines and put it in "C:\Program Files\Lyx16\bin\

```
library(tools)
args <- commandArgs()
filename <- args[length(args)]
Sweave(filename)
basename <- sub("\\.(Rnw|Rtex|nw)$", "", filename)
texi2dvi(paste(basename, ".tex", sep=""), pdf=TRUE)
```

7. You must now configure in Lyx the converter for noweb files.
Go to Edit->Preferences->File Handlers->Converters.
In the "From" pulldown, choose Noweb. In the "To" pulldown, choose \LaTeX (pdflatex).
In the box called "Converter" type "Rweave \$\$i" without the quotation marks.
If necessary, click the "Modify" button and save the new command.
8. You can now test your installation by opening an example file that contains R *scraps*. For example Paul Johnson's Gamma distribution document:
<http://pj.freefaculty.org/stat/Distributions/Gamma-02.lyx>
You can typeset this document using the pdf icon and the resulting file should open in the acrobat viewer you have configured in Lyx. You should be able to read the results of computations and see the plots.