

SOFTWARE

IN A PERFECT WORLD

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of science even computer nerds would need just one single word processor plus a statistics, a graphics and a bibliography program. While under Windows my work horse was Word + Endnote + SAS + Sigmaplot I have been stepping forward under OS X to MacTex + BibDesk + R (+ thinking about Aabel). [LYX](#) is a nice frontend for [MacTex](#) with a nice surprise as the package included also [BibDesk](#) that can import [Papers'](#) references.

So the final task was to integrate R into the LYX environment where an online [documentation](#) helped me very much. A hurdle not mentioned there is to select the right style for the R code in the article(Noweb) template: it is "scrap" or "Ausschuss" in the German version ;-)

Nome non est omen – this looks already like a perfect setup (if you have also seen doctoral students tearing with MS Word), yea, yea.

The screenshot shows a LYX document interface. On the left, the document structure pane shows a section titled "1 In a perfect world" with a sub-section "1.1 we would have". The main text area contains R code for generating a plot of $\exp(-z^2)$ against z . The code is as follows:

```

Figure 1: Decrease

<<fig=T,echo=F,height=4>>=
asequence<-seq(from=0,to=5,by=0.1)
expnegx2 <- exp(-asequence^2)
plot(asequence,expnegx2,type="l",ylab=expression(exp(-z^2)),xlab="z")
@

```

Below the code, there is a sub-section "1.1 we would have" with a citation: "yx [Anonym:2008p9632]". At the bottom, there is a footer: "BibTeX-erzeugtes Literaturverzeichnis". On the right, a preview of the rendered document is shown, featuring a plot of $\exp(-z^2)$ against z and a list of references:

1 In a perfect world

1.1 we would have

y|[

References

[1] A brief history of raw milk, page 3, Nov 2008

[2] Got raw milk, page 4, Nov 2008.

[3] How treatment and pasteurization, page 5, 7

[4] Should this milk be legal, page 1, Nov 2008.

