

Instructions for L^AT_EX Installation

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1 Installation

1. Make sure you have R on your computer and that the directory specification to the bin sub-directory of R is in your path. For example, my path contains C:\Program Files\R\R-2.14.0\bin. If you don't know what a path is, get help from your IT folks. It is set with Control Panel/System & Security/ System/Advanced/Environment Variables. You may need Admin privilege to set it. Also, before installation of L^AT_EX it is best to close all programs and not do anything else on the computer as this is a time consuming process and it requires a good internet connection because it will access the internet throughout the installation. At the end it will look like it is nearly done and there is a note that it will take some time – trust it – it will take some time. Be patient and don't assume your machine has hung.
2. <ftp://ftp.lyx.org/pub/lyx/bin/2.0.1> click on the link and then click on the file Lyx-2.0.1-1-Bundle-Installer.exe and save it somewhere
3. Right click on the above file where you saved it and use Run as Administrator – You'll need a local Administrator account. It will setup Lyx and then MikTeX.
4. When asked, make sure you set up L^AT_EX and MikTeX for all users (the default) and use the default locations to store the files. The only thing you want to change is the paper size from A4 to Letter and yes to install packages on the fly under the MikTeX setup.
5. Once it is completed, start L^AT_EX (with regular non-admin account) and open (File/Open) the sweave.lyx file under Resources sub-directory of the L^AT_EX directory. If you get an error message that about missing package sweave->latex, click on Tools/Reconfigure. When it is done, close L^AT_EX and restart it. Repeat this step to see if you can open the file without that error. If you cannot then you do not have your path to R setup correctly. You can test that by Start/AllPrograms/Accessories/Command Window. Type Rscript. If it gives some help messages then your path is fine. If it gives an error that the command is unknown or bad then your path is not setup correctly.

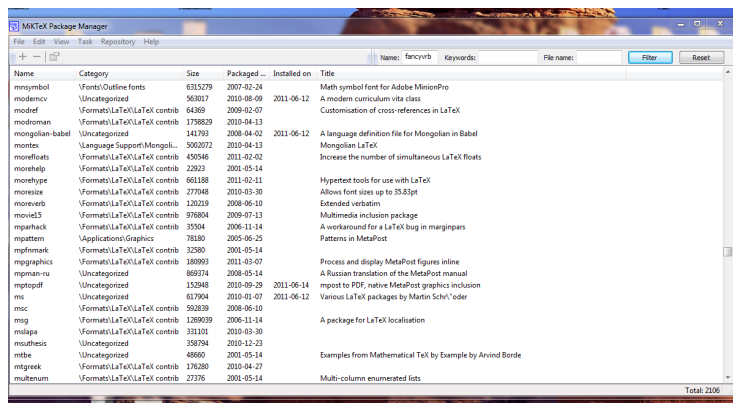


Figure 1: Adding a missing package, class or style file with MikTeX/Maintenance/Package Manager.

- Once you get past step 5, click on the icon with the two eyeballs on the far left. If a pdf document appears you are good to go. If it doesn't, click on View/View messages and click on the eyeballs again and copy the material in the view window and see what error it is giving.

Other errors may occur if your installation did not complete. If that happens then you should probably uninstall (Control Panel/Uninstall Programs) both LyX and MikTeX and start over. If it is simply missing package, style or class file for a document, use this next section to add the missing files into the L^AT_EX (MikTeX) configuration.

2 Adding missing L^AT_EX files

Even though MikTeX is supposed to add packages on the fly, LyX will produce an error when it cannot find a class, style or package (not to be confused with R packages). When this happens or when you want to use one of those that are not installed then you need to add it with the MikTeX Admin programs. You can find them in Start/Program Files/MikTeX/Maintenance. First you use Package Manager to locate and install the necessary file(s). It will show a list of all the files alphabetically and when they were installed, if they are installed. You can select one from the list manually or by entering a name, keyword or file name and select Filter.

In Figure 1 I selected fancyvrb because this is one that you may encounter. However, on my computer it is already installed, so I'll select another and show how it is installed in Figure 2.

Click on okay and it will install it if you can access the internet. After it has completed, click on the close and if you look on the package list it will show the current date under installed. Next you need to use MikTeX/Maintenance/Settings

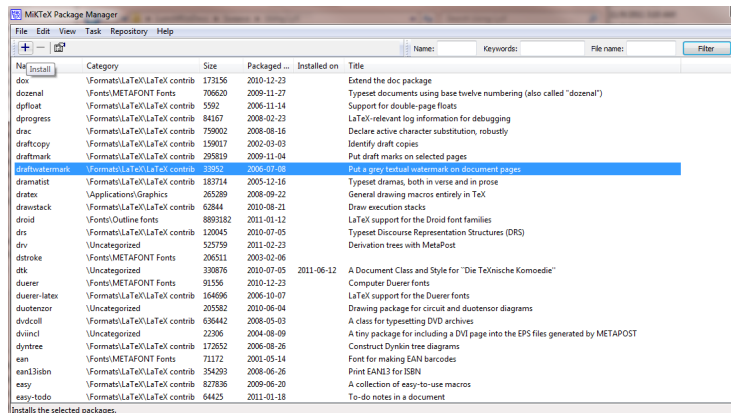


Figure 2: Installing a missing package.

program to refresh the package database. As shown in Figure 3, you click on refresh FNDB and then Update Formats. Once both are completed click on ok.

The final step is to start LyX, and select from the menu Tools/Reconfigure. Once it has completed the reconfiguration it will ask you to close and restart LyX. If everything has worked, when you restart LyX, the package, class or style file should be available for use.

3 More LyX options and setup

When you use Sweave with LyX, Sweave is run in R and the working directory for R is the directory that contains the .LyX file that you are Sweaving. However, the .Rnw, .Tex and other files that it creates for the pdf creation are contained in a temporary directory that is removed upon closing LyX. By default, this temporary directory is stored in a hidden directory (appdata) under the user directory (e.g., C:\Users\JLaake\AppData\Local\Temp). This location is not particularly easy to access, so I recommend changing the path with the Tools/Preferences, to a location that you can easily access as shown in Figure 4. Usually you need not bother with those files but if there is a problem with either your R code or your Tex, it can be useful to examine the .Rnw or .Tex text files in the directory.

Another way to track down errors is to select View/View Messages from the LyX menu. It will open a window at the bottom of the screen and as you process the pdf document it will show what is being done and any errors that occur. Look through the entire window as the R coding error may be shown prior to the last error message. This window also shows other LyX errors/messages. For example, in Figure 5 it keeps showing messages that I should stop trying to put 2 spaces at the end of a sentence which is an unnecessary habit from using Word. LaTeX takes care of all that formatting for you.

Another useful window is the View/View Source window which shows all

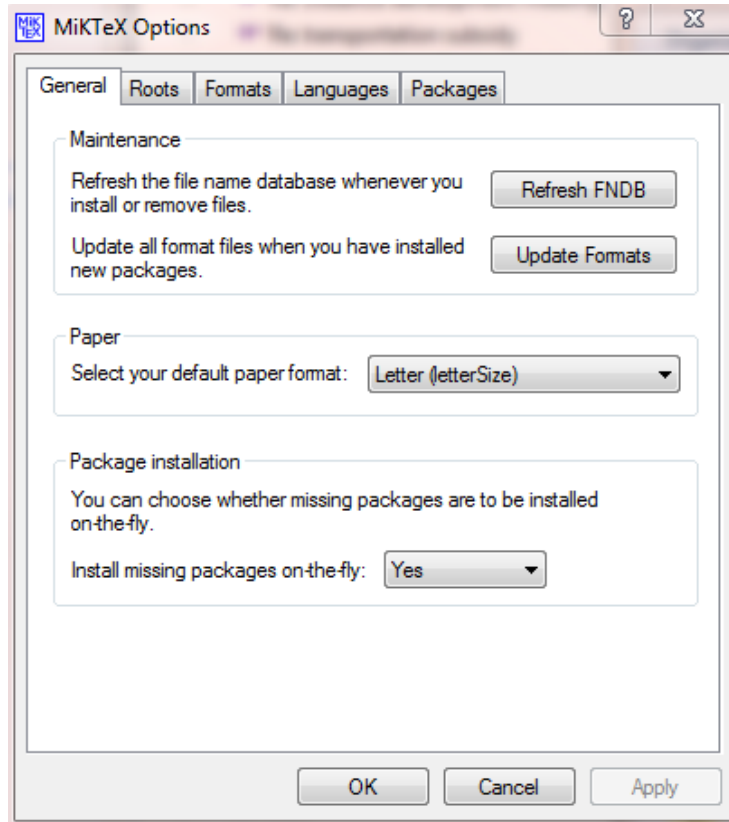


Figure 3: MikTeX settings program. Refreshing database and updating formats after adding a package, class or style file.

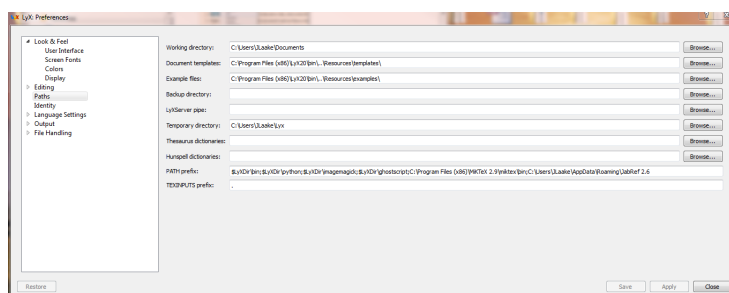


Figure 4: Changing the location of the temporary directory for the Sweave temporary files. As shown mine is setup to be C:\Users\JLaake\Lyx.

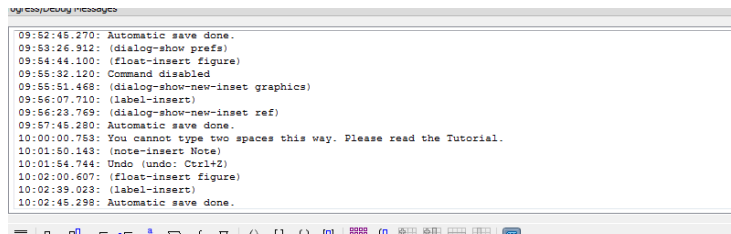


Figure 5: View messages window in LyX which is useful for tracking down R coding errors and other LyX problems.

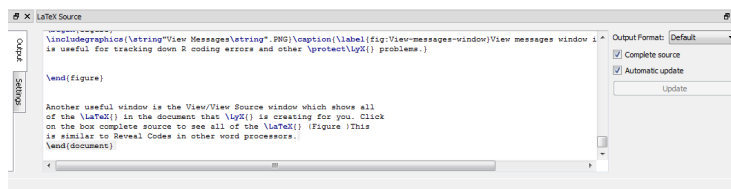


Figure 6: Viewing \LaTeX source with the View/View Source option.

of the \LaTeX in the document that LyX is creating for you. Click on the box complete source to see all of the \LaTeX (Figure 6). This is similar to Reveal Codes in other word processors.

4 HELP!

LyX is a very capable word processor like Word and others but it works very differently from Word. Thus, it is important to spend some time with the help and tutorials that accompany LyX (Figure 7). If you open one of these files, it will appear in LyX format but if you want to read it in the more polished form, click on the two-eyeball icon and it will convert it to pdf (Figure 8). The tutorial is nicely done and will take you through all the steps needed to create a LyX document and use its features. I will follow up with a tutorial of sorts that focuses on Sweave documents.

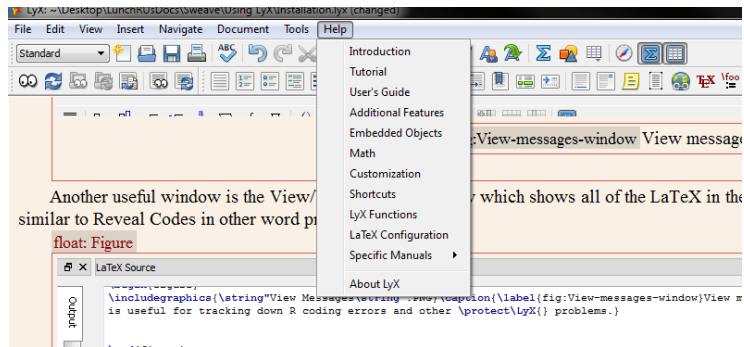


Figure 7: Accessing LyX help files.

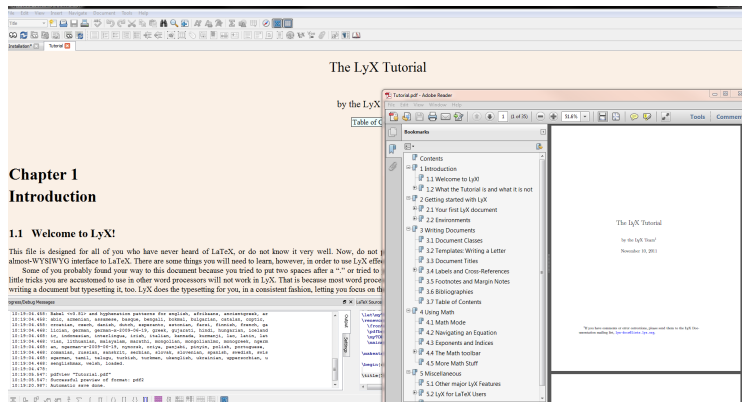


Figure 8: Viewing help files in pdf format.