

mknrndll shortcut for Windows v2.0

- Add to right-click context menu

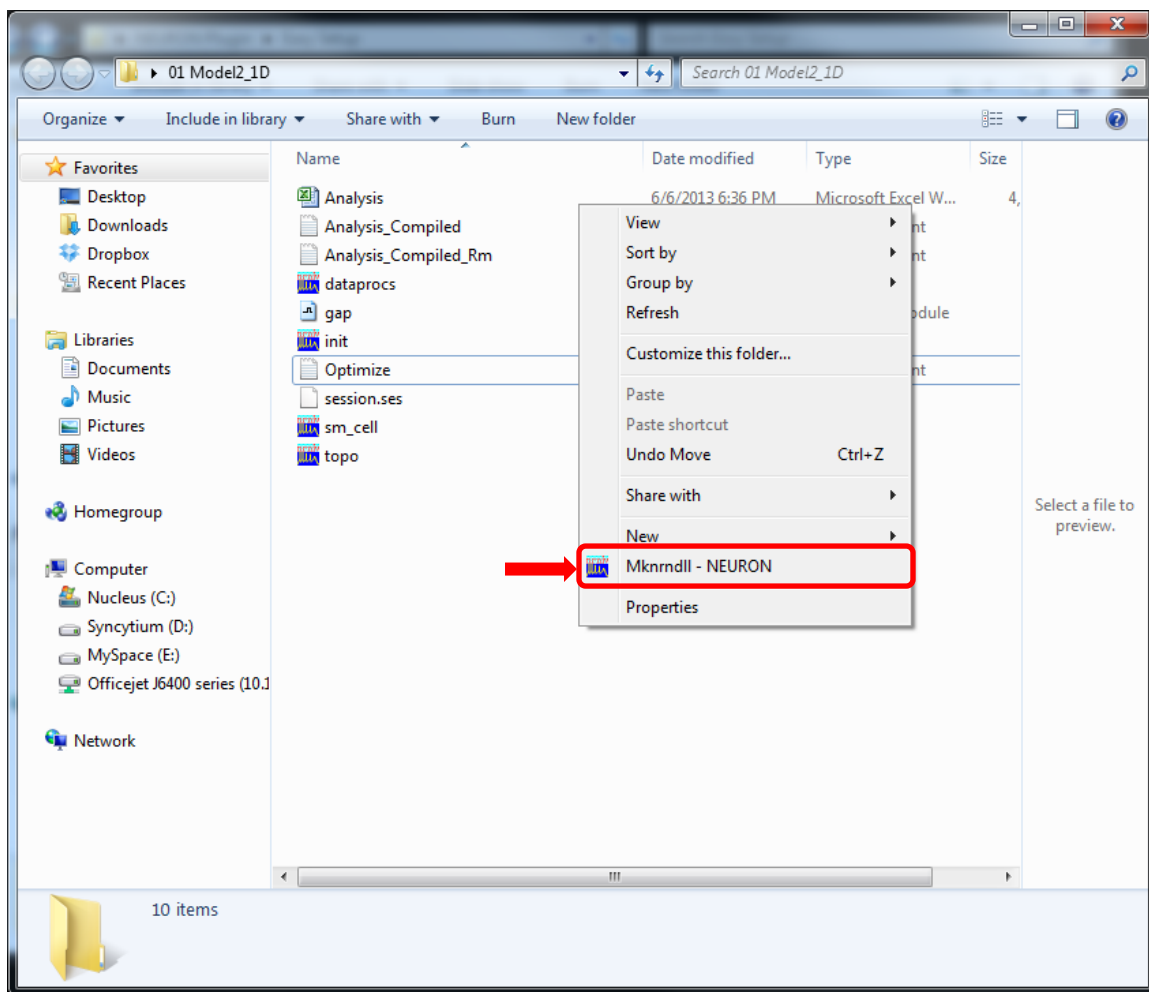
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Tested on: Windows 7 (32-bit/64-bit) with NEURON 7.3

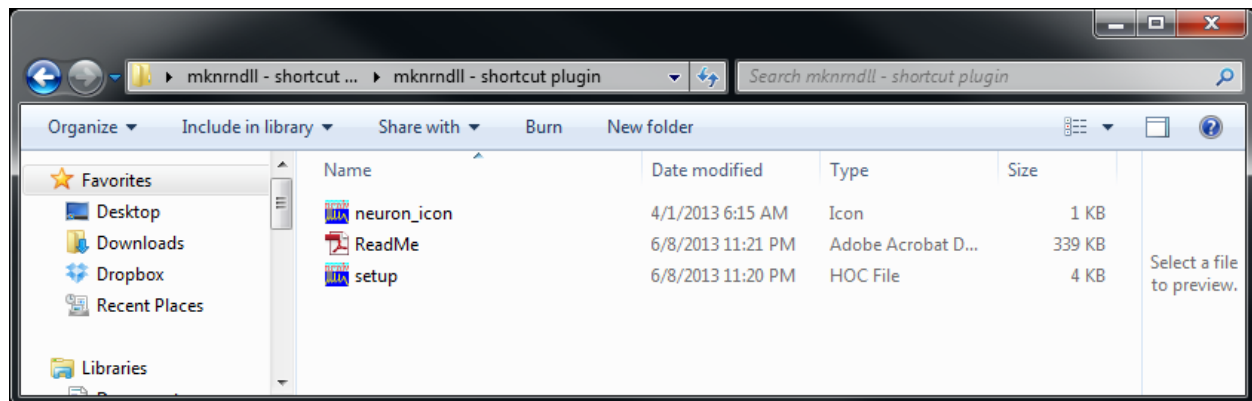
✓ What does this do?

This NEURON plug-in would provide a shortcut for compiling .mod files by adding 'mknrndll' as an option to mouse right-click context menu. It also avoids having to specify the compile directory by implicitly accepting the folder inside which you right-clicked as the location.

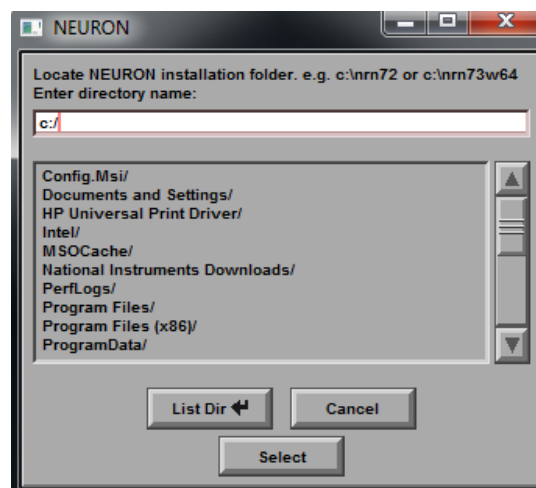
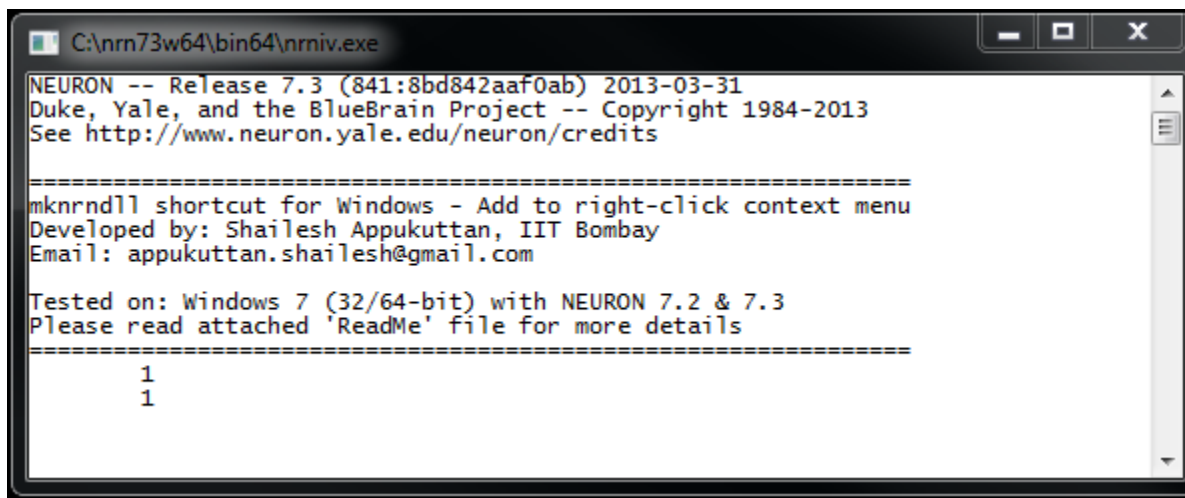


✓ How to install the plug-in?

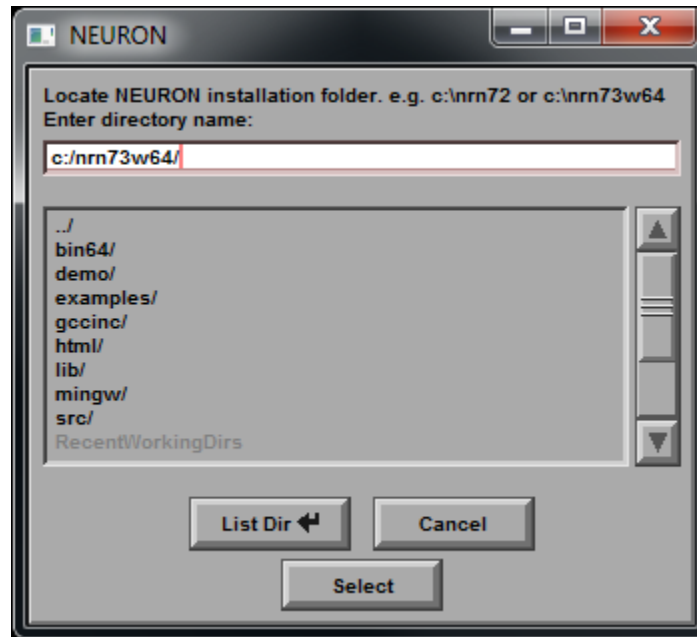
1. Extract the zip file to a folder
2. Your folder would have 3 files after extracting:



3. Double-click the 'setup.hoc' file to install the plug-in
4. You would see the NEURON command terminal and a directory select dialog box:

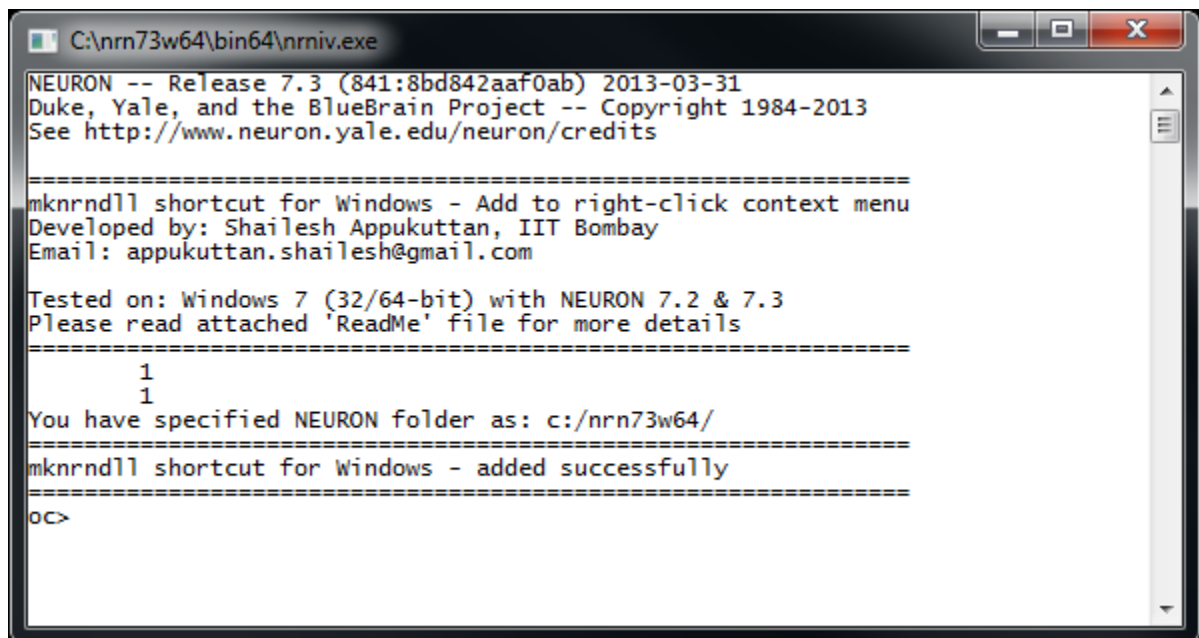


- Here you need to select your NEURON installation folder:

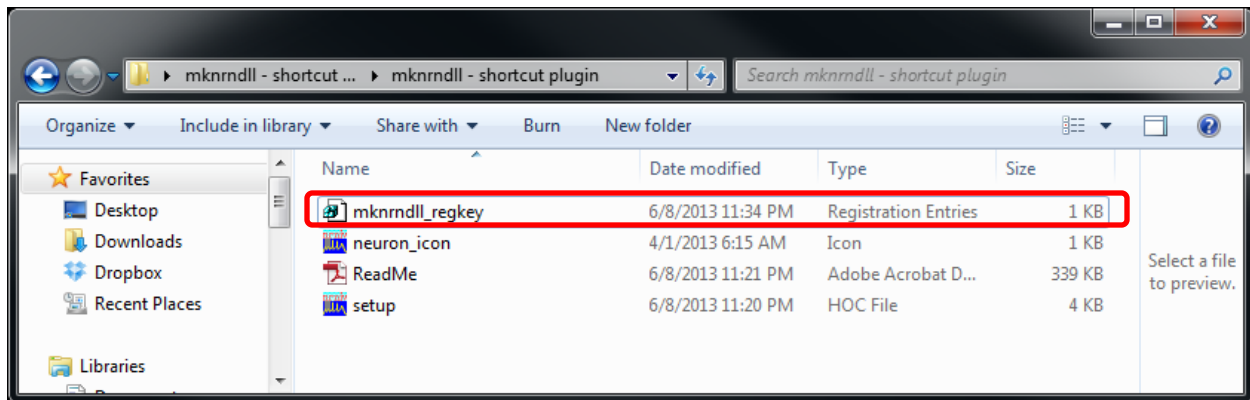


(I had NEURON 7.3 64-bit installed on my system – hence the default install directory is: C:\nnr73w64)

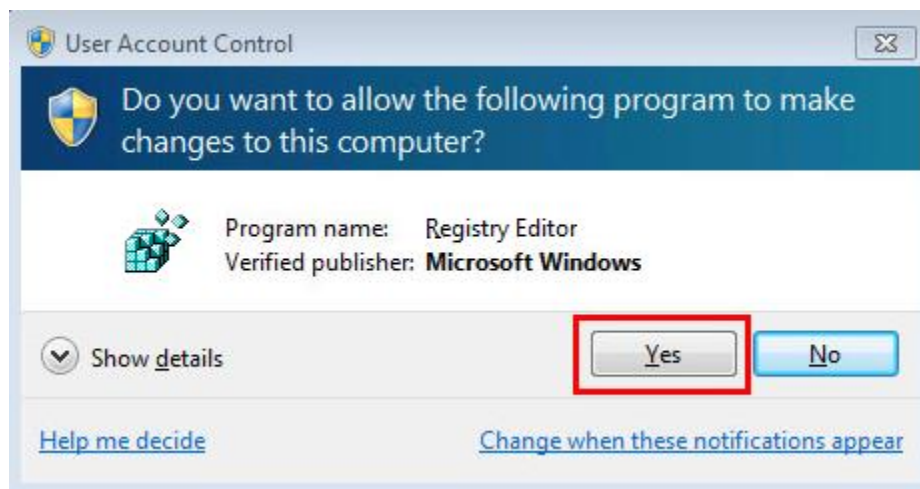
- Press 'Select' to confirm the selected directory
- If everything went fine, you would expect to see the confirmation on the terminal:



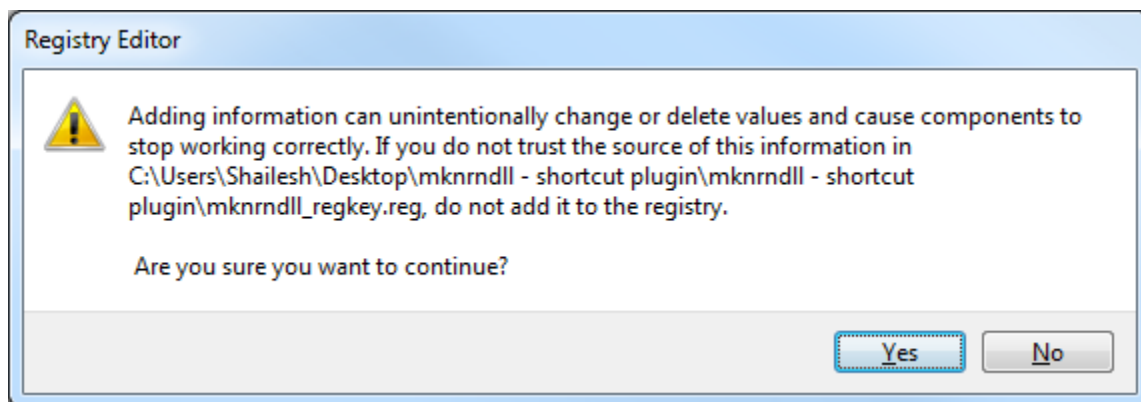
- Now back in your folder (where you had extracted the files initially), you would see one new file that has been created: '*mknrndll_regkey.reg*'



9. Double-click this file to run it. You might get a Windows message such as:



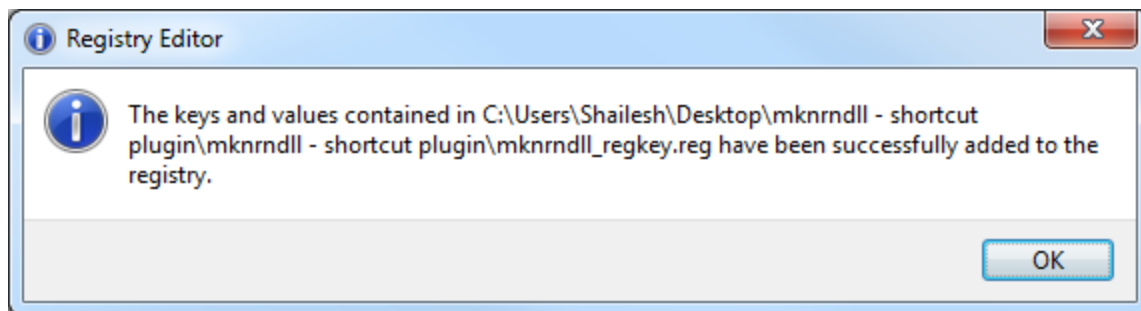
10. Press 'Yes'. You might see one more pop-up dialog box:



11. Press 'Yes', if you wish to continue ahead.

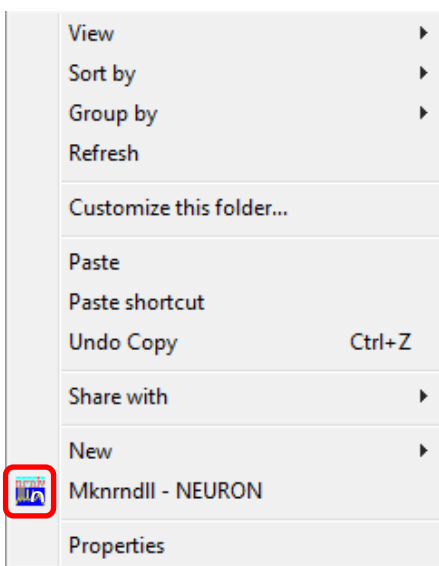
Disclaimer: The Windows Registry File is vitally important to the proper operation of the Windows operating system. It is advised not to tinker with it.

12. You should get the following confirmation:

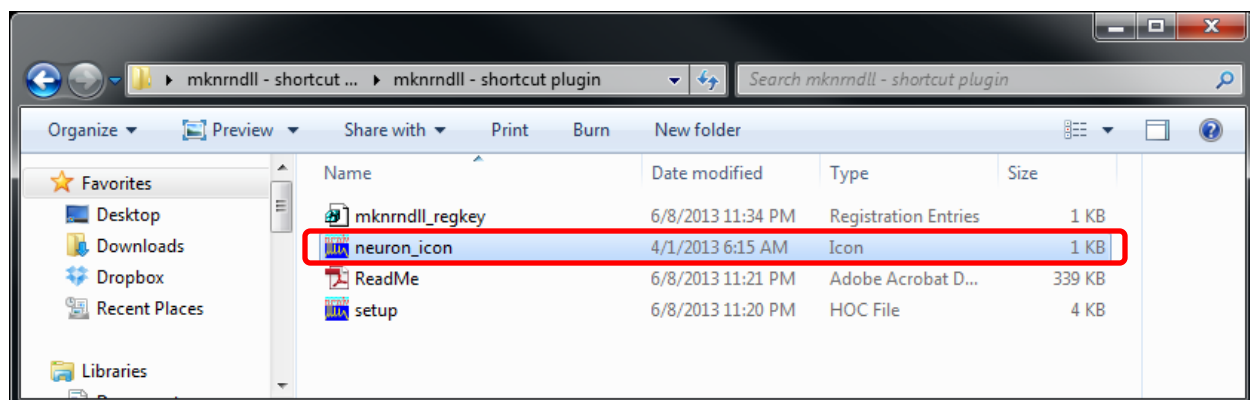


13. And you are almost done. The next step is optional.

14. To have the NEURON icon appear next to the 'Mknrndll – NEURON' option in the right-click context menu, i.e.



Copy 'neuron_icon.ico' from the extracted folder:

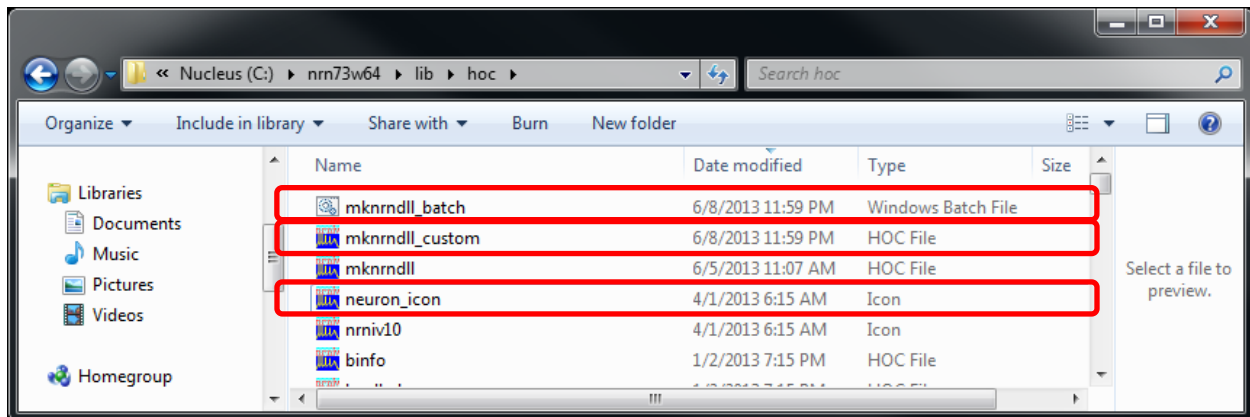


And move/paste it in '{NEURON folder}/lib/hoc'

- where {NEURON folder} is the directory you selected in step 5

15. Just to verify that everything has been setup properly, open '{NEURON folder}/lib/hoc' and check that the following files exist:

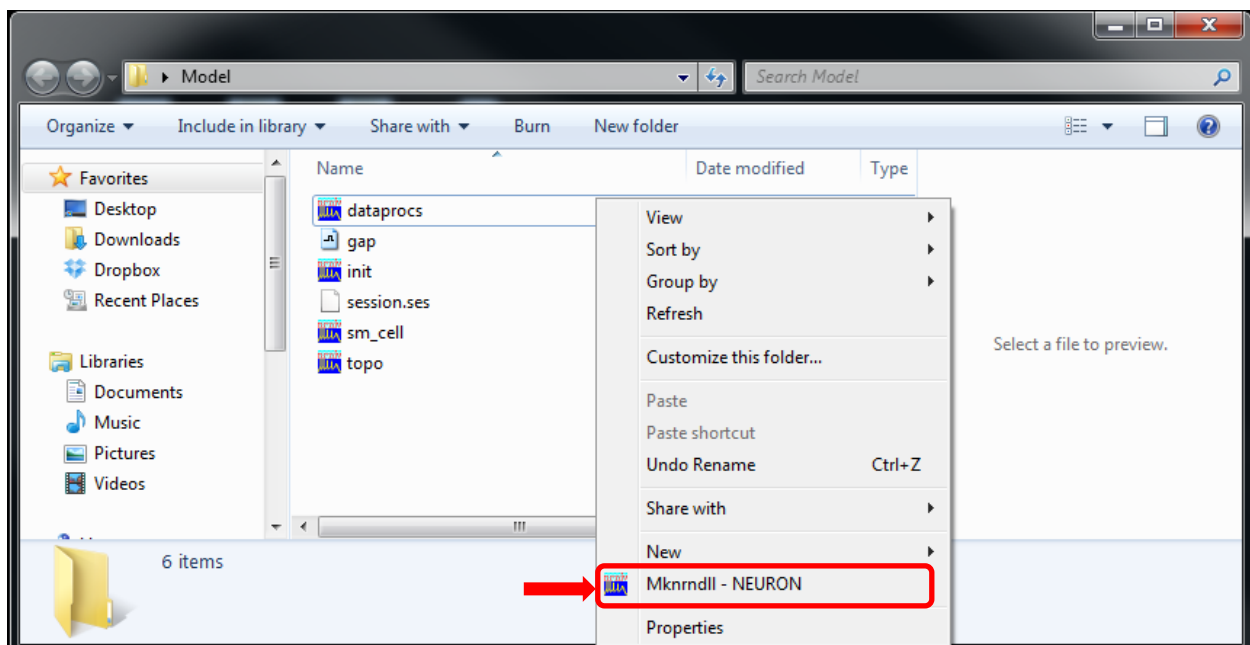
- i. *mknrndll_batch.bat*
- ii. *mknrndll_custom.hoc*
- iii. *neuron_icon.ico* (if step 14 was followed)



16. Setup is completed and we can now start compiling .mod files via the new shortcut.

✓ How to use the tool?

1. Open your project folder containing your .mod and/or .hoc files.
2. Right-click anywhere inside the folder to get the right-click context menu:



3. Select 'Mknrndll – NEURON' from this menu.

4. *mknrndll* would proceed to compile all the .mod files in the current directory – where you had right clicked. From here on everything is similar to the traditional method of using *mknrndll*.

✓ Bugs / Errors / Queries / Suggestions

- I have tried to test it on several computers with different versions of Windows and NEURON releases. But I could certainly have missed something, somewhere. Do let me know if you have any trouble using this plug-in.
- Contact me at: appukuttan.shailesh@gmail.com
- *Update [Sept. 13, 2013] – See end of this file for info on resolving known issues*

✓ How does this plug-in work?

- '*setup.hoc*' requires the user to specify the NEURON installation folder
- Based on this selection, '*setup.hoc*' generates 3 new files:
 - i. *mknrndll_batch.bat* – in '{NEURON folder}/lib/hoc'
 - ii. *mknrndll_custom.hoc* – in '{NEURON folder}/lib/hoc'
 - iii. *mknrndll_regkey.reg* – in extracted folder
- '*mknrndll_batch.bat*' is a batch file containing DOS commands for recording the current working directory, where the right-click occurs, into a text file named '*temp_NMODLpath.txt*' in NEURON's base folder. It then runs '*mknrndll_custom.hoc*'
- '*mknrndll_custom.hoc*' is a modified version of the original '*mknrndll.hoc*' file. The difference being that the modified file picks up the target directory path, for compiling, from '*temp_NMODLpath.txt*', created above
- '*mknrndll_regkey.reg*' is a registry editor file that adds the shortcut option to the right-click context menu

✓ Is this plug-in safe?

The intention behind having the setup as a .hoc file (rather than an .exe) was to allow the user to check the source code himself – if in doubt ☺; Also it seemed right to have a NEURON plug-in written in its regular file format.

✓ Disclaimer ☺

Not responsible for direct, indirect, incidental or consequential damages resulting from any error or failure to perform.

✓ How to uninstall the plugin?

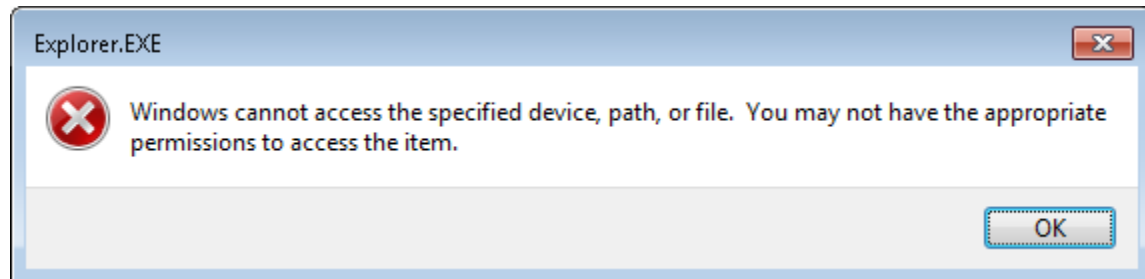
1. Delete the following files:
 - i. `mknrndll_batch.bat` – in '{NEURON folder}/lib/hoc'
 - ii. `mknrndll_custom.hoc` – in '{NEURON folder}/lib/hoc'
 - iii. `neuron_icon.ico` – in '{NEURON folder}/lib/hoc'
 - iv. `temp_NMODLpath.txt` – in '{NEURON folder}'
2. For the simplest method to remove the registry entry, and thus the option from the right-click context menu, download this small software:
Right Click Context Menu Adder 2.0
Link: <http://rightclickcontextmenuadder.en.softonic.com/>
3. Select the second tab 'Remove items from menu' and select 'Show items displayed on Desktop Context Menu and Folders Context Menu' in the radio button below:



4. 'Mknrndll – NEURON' would appear in the list at the center. Select it and press 'Remove'.
5. Press 'Yes' on the confirmation dialog box. The plug-in has been uninstalled.

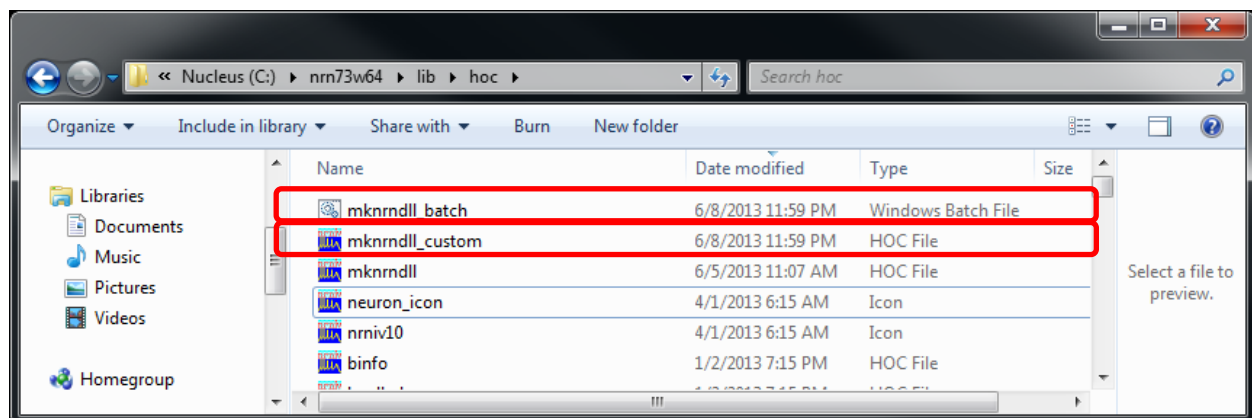
✓ Known Issues & Solutions

- When running the tool from the right-click context menu, if you happen to encounter the following error:



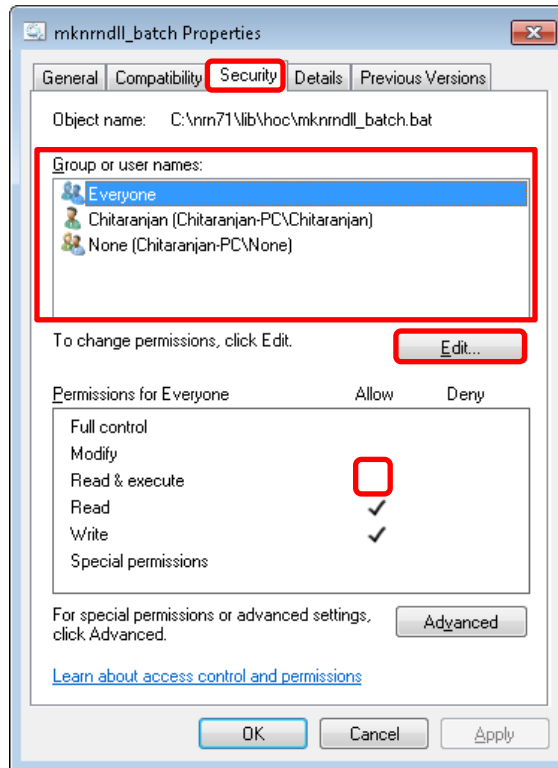
Then do as follows to resolve:

1. Browse to '{NEURON folder}/lib/hoc' - where {NEURON folder} is the directory you selected while installing the plugin.
2. Here, we need to change the file permissions for the following files:
 - i. *mknrndll_batch.bat*
 - ii. *mknrndll_custom.hoc*

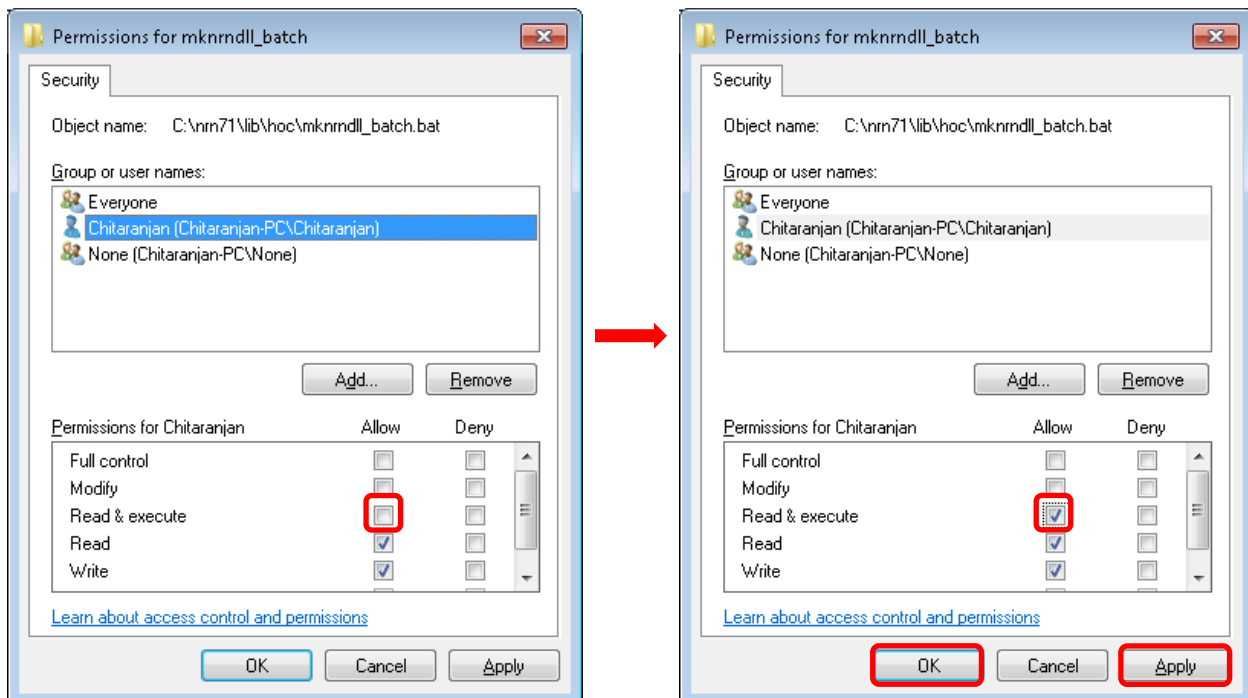


3. Select one of the files, right-click and select 'Properties' from the menu.
4. In the window that opens, select the 'Security' tab on the top.

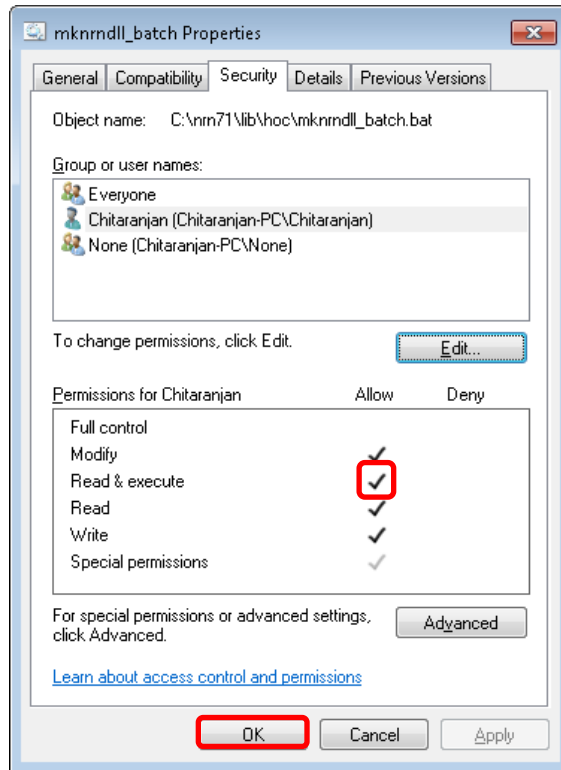
The contents of 'Group or user names' would vary from that shown in the figure. You would see that 'Read & execute' permission is not enabled.



- Click on 'Edit...' button.
- Select your '{username}' or 'Everyone' under 'Group or user names', and tick the box to allow 'Read & execute'. Click 'Apply' to enforce the changes. Click 'OK' to return.



7. You would return to the earlier window and see that '*Read & execute*' permission has been granted to the selected user. Click '*OK*' to finish.



8. Repeat the above steps for the other file mentioned in step 2.
9. Once the permissions for both the files have been updated, you should be able to run the tool from the right-click context menu.