

## How to transfer a Dymola model to the NXT

1. In Linux, open a terminal and start VirtualBox: `>VirtualBox`  
Start the virtual Windows XP.
2. Start Dymola. Make sure that all appropriate flags are set and the appropriate libraries are loaded. It is convenient to write a script that does this, see the slides from Ulf's tutorial.
3. Make sure that Dymola's working directory is `C:\cygwin\nxtOSEK\samples_c\dymola`. This can be done in the script as well.
4. Translate your model.
5. Start **CYGWIN**.
6. In cygwin, change directory to Dymola's working directory.
7. Compile your model by typing  
**make all**
8. Connect the LEGO-NXT to the computer via the USB-cable.
9. Turn on the NXT. The NXT should make a clicking sound.
10. Transfer the code by typing  
**./ramboot.sh**  
If cygwin returns **bash: ./ramboot.sh Permission denied**, change user execution permission by typing **chmod 700 ramboot.sh** and try again.
11. If cygwin complains about the NXT not being connected, check the USB-cable again. If it is indeed connected, go to the VirtualBox menu **Devices->USB Devices** and make sure that all **Unknown devices** are checked.

### *How to pair the NXTs Bluetooth with Windows.*

1. Upload any program to the NXT but don't press **RUN**, see the section above.
2. Go to the **Start menu, Connect to, Bluetooth Network Connection**.
3. **Open Bluetooth devices**.
4. Connect the NXT via the USB cable and turn it on by clicking the orange button.
5. Choose **Add...**, check the **"My device is set up and..."** and click **Next**.
6. Choose the found device and click **Next**.
7. Check the **"Use the passkey found in the documentation"** and enter the same Bluetooth passkey as specified in the `dymola_wrapper.c`, the default is **1234**. Press **Next** and you should get a window saying which Incoming and Outgoing COM ports that are assigned to the NXT.
8. In your model, double click on the **Configuration block** and make sure that the Bluetooth port matches the assigned **Outgoing port**.
9. Translate and compile your model again.
10. Upload the program once more. The display on the NXT should read **Start host!**
11. Start the simulation in Dymola and the display should read **Run NXT**.
12. Press **RUN** and the program should start executing. Stop the program by clicking **Stop simulation** button in Dymola. Press the rectangular button on the robot to stop the robot.