HOWTO install TinyOS2 on Windows/Cygwin

1. Install JDK 1.5 or (better !!) higher

2. Install Cygwin from [http://www.cygwin.com](http://www.cygwin.com) choose the following packages
   - autoconf
   - automake
   - bison
   - cvs
   - ddd
   - flex
   - gcc-core, gcc, g++
   - gdb
   - gzip
   - joe
   - make
   - complete python devel library
   - rpm
   - tar
   - vim
   - which

3. Install all the tools in Step 3 (native compilers) and 4 (TinyOS toolchain) mentioned at [http://docs.tinyos.net/index.php/Installing_TinyOS_2.1](http://docs.tinyos.net/index.php/Installing_TinyOS_2.1)
   for Windows/Cygwin platform
   use "rpm -ivh--ignoreos" command !!

4. Install TinyOS-2.x from CVS in order to have a complete source tree (incomplete if you install from rpm)
   a. Start cygwin
   b. Go to cygwin root (probably /cygwin/)
   c. type "mkdir opt"
   d. type "export CVSROOT=/opt"
   e. "cd opt" and then type "cvs init"
   f. type "touch /home/$USER/.cvspass"
   g. type "cvs -d:pserver:anonymous@tinyos.cvs.sourceforge.net:/cvsroot/tinyos login"
   h. press enter for a blank password
   i. type "cvs -z3 -d:pserver:anonymous@tinyos.cvs.sourceforge.net:/cvsroot/tinyos co -P tinyos-2.x"
   j. This will take some time to download everything.

5. Set and check installation environment
   - set the environment variables as explained in Step5 of TinyOS installation webpage
   - "tos-check-env"
6. Check if java path is properly installed.
   o "tos-install-jni" java
   o if error, change in /usr/bin/tos-install-jni change:
     "$tinyoslibdir/*-$bits.dll" to "$tinyoslibdir/*.dll"
   o type "tos-locate-jre"

7. Try to compile on "telosb","mica2","micaz" platforms, go to /opt/tinyos-2.x/apps/Blink and type
   "make telosb"

8. Check TOSSIM environment, in /apps/Blink type "make micaz sim"
   o if it complains about python, better check with python-devel cygwin installation. make sure
     that "python --version" is the same as defined in opt/tinyos-2.x/support/make/sim.extra
     (PYTHON_VERSION)

9. Compile and check Java environment
   o go to /opt/tinyos-2.x/support/sdk/java, type "make"
   o if it complains about java, check if both "java" and "javac" exist and have a correct path.
   o create symbolic links in /usr/bin to the java executables in /cygdrive/c/Programm\Files\jdk**
   o To test java, go to /apps/tests/TestSerial, type "make telosb"
   o read http://docs.tinyos.net/index.php/Java_cygwin if you have problems

10. Probably good to check c environment, go to /opt/tinyos-2.x/support/sdk/c/sf/
    o "./bootstrap"
    o if bootstrap works fine, continue "./configure". If not, probably a problem with a version
      of g++ compile. You can fix this with a symbolic link. For example, instead of "gcc_4.0",
      use "ln -s gcc gcc_4.0".
    o finally type "make"