Aqua-Sim Installation Guide

Installing the essential packages

Before installing Aqua-Sim, you should make sure that your Linux system contains the essential libraries for the installation of ns-allinone-2.30. Usually, it requires gcc/g++ compiler, automake, X11 lib. To make Aqua3D works, some other packages, such as freeglut, GTK+ 2.0 and wxGTK-2.8.11, are also required. For more details, please refer to the website of Aqua3D: http://ubinet.engr.uconn.edu/mediawiki/index.php/Aqua-3D

Installing Aqua-Sim

First, enter the directory you place aqua-sim.tar.gz (suppose the directory is ~/aqua-sim). Then run the following commands one by one:

```bash
~/aqua-sim$ tar zxvf aqua-sim.tgz
~/aqua-sim$ cd ns-allinone-2.30
~/aqua-sim$ ./install
```

After finishing the installation, add the following environment variable into .bashrc in the directory of your home directory, i.e., ~/.bashrc

```bash
export NS_HOME=~/aqua-sim/ns-allinone-2.30
export PATH=$NS_HOME/bin:$NS_HOME/tcl8.4.13/unix:$PATH
export LD_LIBRARY_PATH=$NS_HOME/otcl-1.12:$NS_HOME/lib:$LD_LIBRARY_PATH
export TCL_LIBRARY=$NS_HOME/tcl8.4.13/library:$TCL_LIBRARY
```

Then, you should restart the terminal or use "source .bashrc" to activate the new environment variables.

Now, you can input ns in the command line, and '%%' will appear if the installation is successful.

```bash
$ ns
%%
```

After quitting ns by inputting exit, you can enter directory "~/aqua-sim/ns-allinone-2.30/ns-2.30/underwatersensor/uw_tcl/" and test underwatersensor module via running the scripts in this directory. For example,

```bash
$ ns vbf_example_5.tcl
```

Also, you can enjoy the amazing Aqua-3D via the following command now.

```bash
$ aqua3d
```

Using the GUI, you can play ns-allinone-2.30/aqua3d-1.0.1/trace_example/general.nam

Trouble shooting:

Some original parts of ns-allinone-2.30 might not be installed successfully to certain compiler. For example, otcl-1.12 fails if gcc version is 4.4. For such errors of original ns2 package, please search the corresponding solutions to ns-2.30. Usually, you can solve the problem. For errors about Aqua-3D, please refer to our website http://ubinet.engr.uconn.edu/mediawiki/index.php/Aqua-3D to check the required lib packages. If it still does not work, please contact us.