

Appendix B: Installation Procedure

I. PATH ENVIRONMENT VARIABLES

Confirm the following path environment variables include the following paths, or export them as necessary:

```
export PATH=/usr/local/bin:$PATH
export CPATH=/usr/local/include:$CPATH
export LIBRARY_PATH=/usr/local/lib:$LIBRARY_PATH
export PKG_CONFIG_PATH=/usr/local/lib/pkgconfig:
$PKG_CONFIG_PATH
```

II. INSTALL FREEIMAGE

Compile and install FreeImage as follows:

- `$ make`
- `$ su`
- `$ make install`
- `$ exit`

III. INSTALL OIS

Configure, compile, and install OIS as follows:

- `$./bootstrap`
- `$./configure --disable-joyevents`
- `$ make`
- `$ su`
- `$ make install`
- `$ exit`

IV. INSTALL ODE

Configure, compile, and install ODE as follows:

- `$./configure`
- `$ make`
- `$ su`
- `$ make install`
- `$ exit`

V. INSTALL FLTK

1. Install `Mesa-devel` from the openSUSE repository using YaST (see paragraph III.F.1.a.).
2. Install `fltk` and `fltk-devel` from the openSUSE repository using YaST.

VI. INSTALL CG

Install `cg` and `cg-devel` from the openSUSE repository using YaST.

VII. INSTALL OGRE

1. Install `zziplib` and `zziplib-devel` from the openSUSE repository using YaST.
2. Install `glew` and `glew-devel` from the openSUSE repository using YaST.
3. Configure, compile, and install OGRE as follows:
 - `$./bootstrap`
 - `$./configure --with-platform=GLX --disable-`

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- \$ make
- \$ su
- \$ make install
- \$ exit

VIII. INSTALL FFMPEG

Configure, compile, and install FFmpeg as follows:

- \$./configure --enable-shared
- \$ make
- \$ su
- \$ make install
- \$ exit

IX. INSTALL PLAYER

1. Install `cmake` from the openSUSE repository using YaST (see paragraph III.K.1.b.).
2. Configure, compile, and install Player as follows:
 - \$ mkdir build
 - \$ cd build
 - \$ cmake ..
 - \$ ccmake ..
 - Set `BUILD_PYTHONC_BINDINGS` to `OFF` (see paragraph III.K.2.b.)
 - \$ cmake ..

- `$ make`
- `$ su`
- `$ make install`
- `$ exit`

X. INSTALL GAZEBO

1. Install `libxml2-devel` from the openSUSE repository using YaST.

2. Revise line 160 of file `Audio.cc`:

```
this->audioIface->data->head.time =  
Simulator::Instance()->GetSimTime();
```

as follows:

```
this->audioIface->data->head.time =  
Simulator::Instance()->GetSimTime().Double();
```

3. Configure, compile, and install Gazebo as follows:

- `$ mkdir build`
- `$ cd build`
- `$ cmake ..`
- `$ make`
- `$ su`
- `$ make install`
- `$ exit`