

# Soccer Simulation 3D Startup Guide Version 1.0.1

The objective of this guide is to help the less used to the RoboCup Soccer Simulation 3D and to the Linux operating system to quick install the simulation environment and start to develop a team.

If something goes wrong, or if you think that more info must be added to this guide, please send an e-mail full of details to [jackson@ita.br](mailto:jackson@ita.br).

## **1- Installing Linux:**

The SUSE 10.0 in English with GNOME is recommended (left at least 6 GB “free” to the SUSE installation).

You may download SUSE 10 from one of the mirrors listed in:

[http://www.novell.com/products/suselinux/downloads/ftp/mirrors\\_isos.html](http://www.novell.com/products/suselinux/downloads/ftp/mirrors_isos.html)

Pay attention on the version (32 or 64 bits).

### **1.1 – In the installation options, add:**

- Graphical Base System

- GNOME System

- C/C++ Compiler and Tools

- GNOME Development

- Java

- And every components which have Ruby, OpenGL or glut.

If you are not sure or if you need help installing SUSE, see the SUSE installation Guide, also available at the ITANDROIDS site:

<http://www.ele.ita.br/~jackson/itandroids/guias.html>

Obs.: The instructions to install the Soccer Simulation 2D are for the root user (I know that for security reasons it is not recommended to use the root user, but it is more simple). If you want to write another guide with a normal user, we will be grateful.

## **2- Preparing the folders:**

Creat a folder “rc” in the /root/ (home of the root user).

- Places->Home Folder

- Right Mouse Button -> Create Folder

In the “rc” folder, create a folder “3d”

In the “3d” folder, create a folder “install”

### **3 – Downloading the Files**

Download the following package to the folder /root/rc/3d/

rcsserver3d-0.5.1.tar.gz

[http://sourceforge.net/project/showfiles.php?group\\_id=24184](http://sourceforge.net/project/showfiles.php?group_id=24184)

Download the following packages to the folder /root/rc/3d/install/

spades-1.10.tar.gz

[http://sourceforge.net/project/showfiles.php?group\\_id=61929](http://sourceforge.net/project/showfiles.php?group_id=61929)

boost\_1\_33\_1.tar.gz

[http://sourceforge.net/project/showfiles.php?group\\_id=7586](http://sourceforge.net/project/showfiles.php?group_id=7586)

ode-0.5.tgz

[http://sourceforge.net/project/showfiles.php?group\\_id=24884](http://sourceforge.net/project/showfiles.php?group_id=24884)

### **4- Expanding the Packages**

Unpack the .tar.gz packages in the same folder that you saved them.

(right mouse button -> Extract here)

One folder for each package will be created:

/root/rc/3d/rcsserver3d-0.5.1/

/root/rc/3d/install/spades-1.10/

/root/rc/3d/install/boost\_1\_33\_1/

/root/rc/3d/install/ode-0.5/

### **5- Installing the base libraries**

Open a terminal:

Applications->System->Terminal->Gnome Terminal

Go to the spades folder:

(The # is the prompt mark, do not type it with the commands).

```
# cd rc/3d/install/spades-1.10/
```

Configure, compile and install SPADES (just type the commands and wait until each of them finish)

```
# ./configure
```

```
# make
```

```
# make install
```

Go to the Boost folder:

```
# cd ..
```

```
# cd boost_1_33_1
```

Configure, compile and install Boost (the Boost compilation – make command – takes much, much time, take a break and drink a coffee, or just see the threes...):

```
# ./configure
```

```
# make
```

```
# make install
```

Go to the ODE folder:

```
# cd ..
```

```
# cd ode-0.5
```

The ODE configuration is a little bit different. Just type the commands:

```
# make configure
# make ode-lib
# make drawstuff-lib
```

Now you must copy some files.

Copy the folder /usr/local/include/boost\_1\_33\_1/boost to /usr/local/include/boost

Copy the folder /root/rc/3d/install/ode-0.5/include/ode to /usr/local/include/ode

Copy the file /root/rc/3d/install/ode-0.5/lib/libode.a to /usr/local/lib/libode.a

## **6- Installing rcserver3D**

Now, go to the rcserver3D folder:

```
# cd ..
# cd ..
# cd rcserver3d-0.5.1
```

Configure, compile and install the rcserver3D:

```
# ./configure
# make
# make install
```

Now you just need to export a variable..

Go to the folder /etc/ and create a file named profile.local

Right mouse button -> Create Document -> Empty File

Type profile.local

Double click the file to edit it.

Just add a single line to the file:

```
export LD_LIBRARY_PATH=/usr/local/lib/rcserver3d:$LD_LIBRARY_PATH
```

Save and close the file.

## **7- Testing the server**

Restart your computer.

Open a terminal:

Applications->System->Terminal->Gnome Terminal

The server+monitor may be run at the root folder, just type:

```
# rcsoccersim3D
```

The monitor will open and you will see the 2 teams taking position at the field.

Press <k> (kickoff) and the match will start. The teams were developed for the 0.3 version, so in this version they do not see the ball very well and just walk around.

Sometimes one sees the ball.

## **8- Programming your own team**

### **8.1 – Updating Anjuta**

Just at the Portuguese version of Guide. Will translate to English and add here when have time.

### **8.2 – Running Anjuta and importing the AgentTest code**

Just at the Portuguese version of Guide. Will translate to English and add here when have time.

### **8.3 –Understanding the AgentTest source code**

In the next version ☺. I'm also planning to release a source code a little better than the AgentTest, but when have time... ☺

## **9- Getting other teams to play**

In the next version ☺

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This installation guide was written by the Professor Jackson Matsuura, Manager of the Robotic Competitions Team of ITA – ITANDROIDS, with the goal of help in the development of new teams for the Soccer Simulation 3D.

Fell free to distribute, since no modifications are made.

The up-to-date version of this guide is available at the ITANDROIDS site:

<http://www.ele.ita.br/~jackson/itandroids/guias.html>

Instructions about the installation of the Soccer Simulation 3D on SUSE originally written by Thomás Cavicchioli Dias, [tcdias@gmail.com](mailto:tcdias@gmail.com).

Corrections from 1.0 to 1.0.1 send by Samuel Regis Pires Carrijo.

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