

Soccer Simulation 2D Startup Guide Version 1.0

The objective of this guide is to help the less used to the RoboCup Soccer Simulation 2D 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.

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

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 “2d”

In the “2d” folder, create a folder “fonte”

3 – Downloading the Files

Download the following packages to the folder /root/rc/2d/
rcssbase-10.0.11.tar.gz
rcssserver-10.0.7.tar.gz
manual.pdf

http://sourceforge.net/project/showfiles.php?group_id=24184

rcssmonitor-9.3.4-0.i386.rpm

<http://www.ele.ita.br/~jackson/itandroids/files/rcssmonitor-9.3.4-0.i386.rpm>

Download the UVATrilearn source code to /root/rc/2d/fonte/

http://staff.science.uva.nl/~jellekok/robocup/2003/trilearn_base_sources-3.3.tar.gz

4- Expanding the Packages

Unpack the .tar.gz packages in the same folder that you saved them (forgot the .rpm for now).

(right mouse button -> Extract here)

One folder for each package will be created:

/root/rc/2d/rcssbase-10.0.11/

/root/rc/2d/rcssserver-10.0.7/

and

/root/rc/2d/fonte/trilearn_base_sources-3.3/

5- Installing rcssbase and rcssserver

Open a terminal:

Applications->System->Terminal->Gnome Terminal

Go to the rcssbase folder:

(The # is the prompt symbol of the Terminal, do not type it with the commands).

```
# cd rc/2d/rcssbase-10.0.11/
```

Configure, compile and install the rcssbase (just type these commands and wait for each one to finish)

```
# ./configure
```

```
# make
```

```
# make install
```

Now go to the rcssserver folder:

```
# cd ..
```

```
# cd rcssserver-10.0.7
```

Configure, compile and install the rcssserver:

```
# ./configure
```

```
# make
```

```
# make install
```

6- Installing rcssmonitor

Now double click the rcssmonitor-9.3.4-0.i386.rpm file.

The Yast will appear, click the button <Install Packadge with YaST>

Just wait and the monitor will be installed.

7- Testing the server

Restart your computer.

Open a terminal:

Applications->Sytem->Terminal->Gnome Terminal

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

```
# rcsoccersim
```

At the prompt you will see a message like:

```
rcssserver-10.0.7
```

```
Copyright (C) 1995, 1996, 1997, 1998, 1999 Electrotechnical Laboratory.  
2000, 2001, 2002, 2003, 2004 RoboCup Soccer Server Maintenance Group.
```

```
Using rcssbase-10.0.11
```

```
Hetero Player Seed: 712402
```

```
wind factor: rand: 0.000000, vector: (0.000000, 0.000000)
```

```
Hit CTRL-C to exit
```

```
Copyright (c) 1999 - 2001, Artur Merke <amerke@ira.uka.de>
```

```
Copyright (c) 2001 - 2002, The RoboCup Soccer Server Maintainance Group.
```

```
<sserver-admin@lists.sourceforge.net>
```

```
reading options from file: /root/.rcssmonitor.conf new (v2) monitor connected
```

And the monitor will be opened in a new window, like the figure:



At the terminal where you run the server, press <CTRL>+<C>. The server will stop and the monitor will close by itself.

8- Compiling a team

Compiling the UVATrilearn base team is like to compile the rcssbase and the rcssserver, you just not need to install.

Open a terminal:

Applications->System->Terminal->Gnome Terminal

Go to the UVA folder:

```
# cd rc/2d/fonte/trilearn_base_sources-3.3/
```

Configure and compile the code (do not install)

```
# ./configure
```

```
# make
```

9- Viewing a match

Open a terminal:

Applications->System->Terminal->Gnome Terminal

Run the server:

```
# rcssoccersim
```

Open a new terminal for team 1:

Applications->System->Terminal->Gnome Terminal

Go to the team folder:

```
# cd rc/2d/fonte/trilearn_base_sources-3.3/
```

Execute the script that loads the team:

```
# ./start.sh
```

You will see the team entering the field at the monitor.

Open a new terminal for team 2:

Applications->System->Terminal->Gnome Terminal

Go to the team folder:

```
# cd rc/2d/fonte/trilearn_base_sources-3.3/
```

Execute the script that loads the team, but using a different name for the team:

```
# ./start.sh localhost TESTE
```

You will see the team entering the field at the monitor.

After the two teams are positioned, click the button "kick off" of the monitor and the match will start.

To start the second half it is also need to press "kick off". Each half lasts 3000 simulation steps.

To end a simulation just press <CTRL>+<C> at the terminal where you run the server.

You may also kill the simulation typing:

```
# killall rcssserver
```

At any terminal.

10- Programming your own team

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

10.1 – Updating Anjuta

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

10.2 – Running Anjuta and importing the UVATrilearn code

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

10.3 –Understanding the UVATrilearn source code

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

11- Getting other teams to play

In the next version ☺

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.

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 2D.

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>

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