

Tutorial 1: Setting Up a Game of RoboCup Soccer on Windows

This tutorial is written for use with the Windows operating system. If you are running Linux or Mac OSX, you may be able to follow these instructions, but you will have to make minor adjustments on your own, which may include compiling the RoboCup Soccer Simulator from its source code.

Preparation

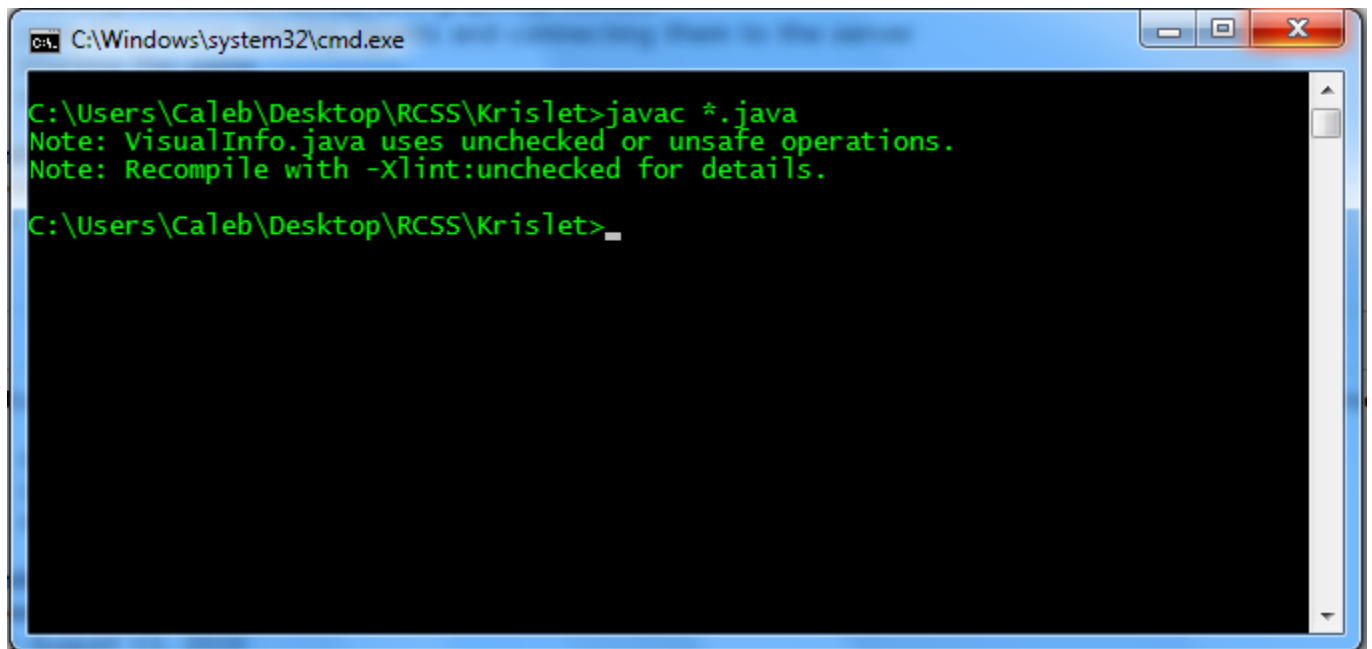
1. Create a folder on your desktop named “RCSS”.
2. Visit <http://sourceforge.net/projects/sserver/files/>
3. Download rcssserver-14.0.3-win.zip and rcssmonitor-14.1.0-win.zip to the RCSS folder and extract both zip files.
4. Visit <http://www.nmai.ca/research-projects/agent-imitation>
5. Click on Downloads, near the top of the page.
6. On the Downloads page, scroll down to the section titled “Software Agent Imitation Datasets”.
 - Clicking on an agent’s name will bring you to a page with a description of what properties the player has .
7. Click on the “Krislet(Java Source)” link and download the zipped file to your RCSS folder. Extract the zipped file into a folder named Krislet in your RCSS folder.
 - The “Krislet” agent is one of many agents available on the Downloads page. If you wish to run a different agent, simply substitute the name of that agent for Krislet everywhere in this tutorial.
8. Compile the Java Source code for the Krislet Agent (Figure 1):
 - a. Using command prompt, change to the directory where Krislet was extracted to using the command:
 - Windows XP:

```
cd C:\Documents and Settings\UserName\Desktop\RCSS\Krislet
```

where *UserName* is your user name.
 - Windows Vista/7:

```
cd C:\Users\UserName\Desktop\RCSS\Krislet
```
 - b. Use the command `javac *.java` to compile the source code (Figure 1). If you do not have the `javac` program you will need to download the Java JDK from java.sun.com/javase/downloads/index.jsp (do not download the JRE).

Figure 1: Compiling Krislet



```
C:\Windows\system32\cmd.exe

C:\Users\Caleb\Desktop\RCSS\Krislet>javac *.java
Note: VisualInfo.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.

C:\Users\Caleb\Desktop\RCSS\Krislet>_
```

Start the Server and Monitor

2. Navigate to the “rcssserver-14.0.3-win” folder inside the RCSS folder. Start the RoboCup Soccer Simulator Server by double-clicking on “rcssserver.exe”.
3. In the “rcssmonitor-14.1.0-win” folder, double-click on “rcssmonitor.exe”, which will provide a graphical view of the game.

Connect Agents to the Server

1. To run a Krislet agent, change to the Krislet directory and use the command `start java Krislet -team TeamName`, where *TeamName* is the name of the team.
 - For convenience, name the first team “Yellow”, and name the second team “Blue”
 - Every time `start java Krislet` is run, a new Krislet agent is run. Each agent represents a single player in the game.
 - The command `start java Krislet` will open an empty window. Closing that window will close the Krislet agent. Do not close the window until you are done running the simulation.
2. Once both teams have been connected to the server, select “KickOff” from the Referee menu (Figure 2) of the monitor to start the game.
3. A counter near the team names indicates the number of cycles that have been completed. When it reaches 3000 (Figure 3), the game will stop for half time. The game can be resumed by selecting the KickOff menu item again. When the counter reaches 6000, the game will end (Figure 4), and the server and monitor can be closed.

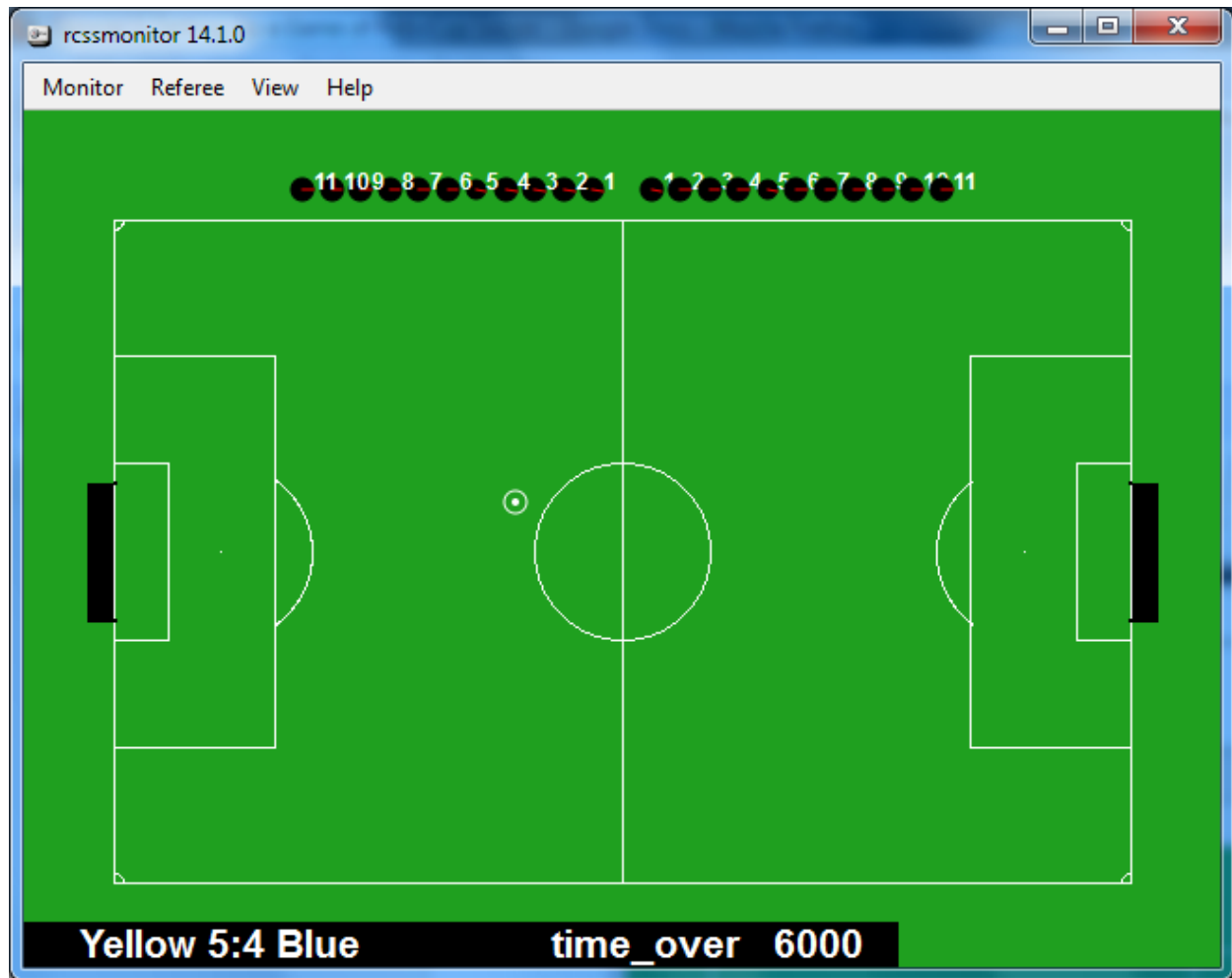
Figure 2: The KickOff menu item



Figure 3: Half time



Figure 4: The end of the game



(Optional) Connecting to the Server on One Computer, Running the Agents on Another

1. On the first computer, run the server as described in Step 1 of *Starting a Game in Windows* above.
2. On the other computer open the monitor as described in Step 1 of *Starting a Game in Windows* above.
3. To connect to the server on the first computer, select "Connect To..." from the Monitor menu (Figure 5) in the monitor window. Replace "127.0.0.1" with either the IP address or host name of the computer running the server.
4. To run Krislet agents on the second computer that connect to the server on the first, run the following commands from a command prompt:

```
start java Krislet -team TeamName -host ComputerName,
```

where ComputerName is the name of the computer that is running the server.
5. If the agents have connected properly they should appear in the monitor window. Once

all players have connected start the game as described in Step 3 of *Connect Agents to the Server*.

Figure 5: The “Connect To ...” menu item

