Soccer Cup 2014 simulation

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Soccer Cup 2014 model

- Run in Maximized mode
- Turn off all toolbars, explorer etc.
- Fits in 1024x768 resolution
First simulation

- Open EventController and reduce speed heavily.
- Explain the 8 groups (A-H) and that teams get put up on the field.
- The match result is simulated and the outcome depends on the "skill level" of each team.
- The whole simulation takes about 0.03 second, so play slow.
The statistics behind

- Open the "Start Here" dialog
- Open the Team Statistics
- The Rate Column are the odds that this team will win the complete tournament – this is used as the team "Skill level"
- For example, if Brazil wins you get 3 times the money back
- The data are from a betting site 1 day before the cup start

### Brazil

<table>
<thead>
<tr>
<th>Code</th>
<th>Team</th>
<th>Group</th>
<th>Rate</th>
<th>Points</th>
<th>Decliners</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Brazil</td>
<td>A</td>
<td>3.00</td>
<td></td>
<td></td>
<td>Brazil</td>
</tr>
<tr>
<td>A2</td>
<td>Cameroon</td>
<td>A</td>
<td>1000.00</td>
<td></td>
<td></td>
<td>Cameroon</td>
</tr>
<tr>
<td>A3</td>
<td>Croatia</td>
<td>A</td>
<td>209.00</td>
<td></td>
<td></td>
<td>Croatia</td>
</tr>
<tr>
<td>A4</td>
<td>Mexico</td>
<td>A</td>
<td>209.00</td>
<td></td>
<td></td>
<td>Mexico</td>
</tr>
<tr>
<td>B1</td>
<td>Australia</td>
<td>B</td>
<td>2500.00</td>
<td></td>
<td></td>
<td>Australia</td>
</tr>
<tr>
<td>B2</td>
<td>Chile</td>
<td>B</td>
<td>54.00</td>
<td></td>
<td></td>
<td>Chile</td>
</tr>
<tr>
<td>B3</td>
<td>Netherlands</td>
<td>B</td>
<td>37.00</td>
<td></td>
<td></td>
<td>Netherlands</td>
</tr>
<tr>
<td>B4</td>
<td>Spain</td>
<td>B</td>
<td>13.00</td>
<td></td>
<td></td>
<td>Spain</td>
</tr>
<tr>
<td>C1</td>
<td>Colombia</td>
<td>C</td>
<td>41.00</td>
<td></td>
<td></td>
<td>Colombia</td>
</tr>
<tr>
<td>C2</td>
<td>CoteDivoire</td>
<td>C</td>
<td>159.00</td>
<td></td>
<td></td>
<td>CoteDivoire</td>
</tr>
<tr>
<td>C3</td>
<td>Greece</td>
<td>C</td>
<td>379.00</td>
<td></td>
<td></td>
<td>Greece</td>
</tr>
<tr>
<td>C4</td>
<td>Japan</td>
<td>C</td>
<td>209.00</td>
<td></td>
<td></td>
<td>Japan</td>
</tr>
<tr>
<td>D1</td>
<td>CostaRica</td>
<td>D</td>
<td>4000.00</td>
<td></td>
<td></td>
<td>CostaRica</td>
</tr>
<tr>
<td>D2</td>
<td>England</td>
<td>D</td>
<td>29.00</td>
<td></td>
<td></td>
<td>England</td>
</tr>
<tr>
<td>D3</td>
<td>Italy</td>
<td>D</td>
<td>25.00</td>
<td></td>
<td></td>
<td>Italy</td>
</tr>
<tr>
<td>D4</td>
<td>Uruguay</td>
<td>D</td>
<td>28.00</td>
<td></td>
<td></td>
<td>Uruguay</td>
</tr>
<tr>
<td>E1</td>
<td>Ecuador</td>
<td>E</td>
<td>229.00</td>
<td></td>
<td></td>
<td>Ecuador</td>
</tr>
</tbody>
</table>
Select the team that you would like specific statistics from at the end of the simulation experiment.
1000 tournaments

- Explain that no simulation results can be trusted after only one simulation run, especially not when stochastic functions are used.
- You have to run a larger number of experiments – this is something our system is very good at!
- Open the Experiment Manager.
- Show the 1000 observations – this is how many tournaments we will run.
- Press Reset and Start.
- Running 1000 observations takes about 10-20 seconds.
The number of total tournament wins are recorded for each nation as the simulation runs.

In the chart here, you can see that Brazil wins about 220 times out of 1000
At the end of the experiment, open the Report.

Now you can close the normal chart (it is found in the report as well).

On the Summary page, you can see the chart.

You can also see the input data (teams and odds).

The table to the lower right states the result data for all nations.
The second report page shows a graph from the focus nation you selected in the previous dialog.

In this example you can see that Germany wins the cup in 16% of the time.
Supporter simulation

- So what can we do to improve the situation (especially if "our" country is not Germany, who already has a good chance...)
- We must focus on what we can do, help our team by cheering!
Supporter simulation

- Start by clicking Init in the Supporter dialog (this resets all tables)
- Then open the EventController (not the same as in the standard model) by clicking Start
- Reduce speed just a small bit (just to see the chart updating a bit more nicely)
Supporter analysis

- Open the Utilization chart and explain that we will analyze the different supporter groups.
- Start the simulation slowly and gradually increase speed.
- The result will look something like this:
- Just mumbo-jumbo.
- Explain that now it is the simulation engineers task to analyze the numbers and see where we can improve!
Supporter analysis

Open the Supporter parameters and explain that we have highlighted some important parameters.

The items relate to "colors" in the chart (waiting, failed, planning, blocking, paused etc.).

Explain that we have to adjust these values:

I suggest the settings to the left:
- We should not wait for the game to start off, cheer from second one!
- Have a good supply of beer
- Act! Don't plan
- Accept that more beer means some interruptions
- Take a break – have fun!

These settings have no impact on the result!
Set whatever you or the audience wants…

Press Set when you are done (this will set the "right" parameters.)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time spent on waiting for &quot;the right mood&quot;</td>
<td>10</td>
</tr>
<tr>
<td>Failures due to &quot;Out of Beer&quot;</td>
<td>20</td>
</tr>
<tr>
<td>Time spent on planning instead of doing</td>
<td>8</td>
</tr>
<tr>
<td>Time blocked from viewing (getting beer, pee breaks etc.)</td>
<td>15</td>
</tr>
<tr>
<td>Paused from work to have a great time!</td>
<td>10</td>
</tr>
</tbody>
</table>
Supporter results

- Play with reduced speed at first (nobody sees what will happen)
- Gradually increase speed
- After about 14 hours, the following picture will appear:
Good Luck!

May the best team win!
Challenge

- I've updated this model several times now and in previous tournaments, my efforts have gone into supporting my country, Sweden.
- Guess you need more beer there…
- With a little trixing, you can modify the settings to have different flags appear at the end.
Alternate introduction

When running this at a customer event, I started by introducing a "normal" demo and then changed the scope slightly… (it was fun to see the audience go from confusion and boredom after slide 3 to a bit more enthusiastic!)
I have a separate presentation for this: