

RoboCup German Open 2011

3D Simulation League Rules

Version 1.0

December 20, 2010

1 Changes to 2010 in Brief

- Playing more (to be decided, updates follow) agents to harmonize with Istanbul rules (has been 6 by 6)
- Referee rules as applied in Singapore 2010
- Penalty shootouts

2 Introduction

This document describes the rules that will be used at the RoboCup German Open 2010 3D Simulation League. Their goal is to provide for fair games and smooth execution of the competitions. The Organising Committee (OC) has the right to append or change these rules at any time within reasonable bounds. All teams will be notified of these changes as soon as possible. Teams can appeal to these changes or to the rules in general, however the final binding decision will be made by the OC.

3 Organizing Committee

- Klaus Dorer - klaus.dorer@fh-offenburg.de
- Simon Raffeiner - sraffein@stud.fh-offenburg.de

Thursday	March 31	Team set-up, group drawing and Round robin 1
Friday	April 1	Round robin 2
Saturday	April 2	Semi-finals
Sunday	April 3	Finals

4 Competition Format

4.1 Schedule

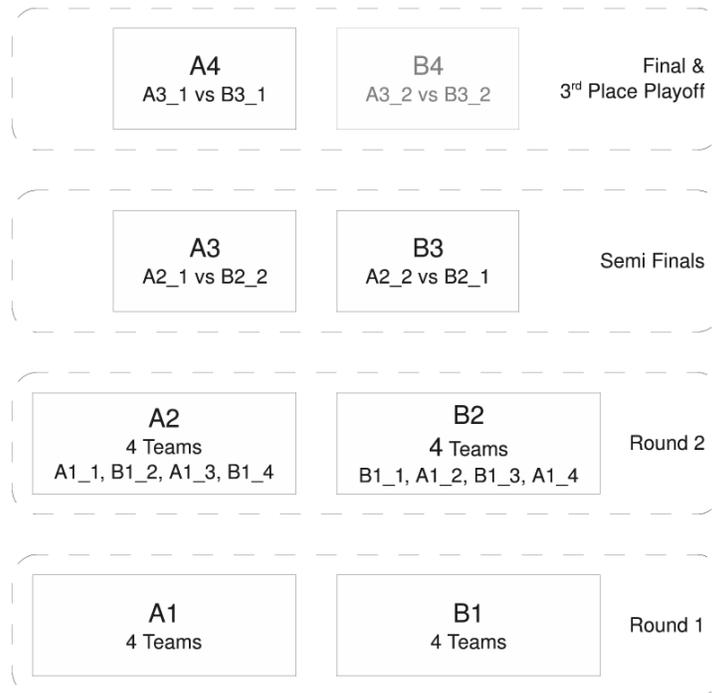


Figure 1: Competition format

4.2 Round Robin

For the round robins, the teams will be divided into two groups, A1 and B1 for the first round and A2 and B2 for the second round. Each team plays each other team in the same group once. For the first round robin the groups will be determined by drawing lots. The groups for the second round will be determined by the results of the first round as follows: group A2 is formed by the first and third best of group A1 and the second and fourth best of B1, the rest will form group B2.

In the round robins, placing will be determined in the following order:

1. Points gathered. A win gives 3 points, a tie 1 point, a loss 0 points.

2. Goal difference (goals scored minus goals conceded) in this round.
3. Head to head game of this round.
4. Two extra halves
5. Penalty shootout

4.3 Finals

After the first two rounds a knock-out system is used. The best two teams of groups A2 and B2 proceed to the semi-finals, where the first team of A2 will play against the second team of B2 and the second team of A2 will play against the first team of B2. The winners of these matches will play against each other in the final (A4), the losers will play a match to decide who wins the third prize.

If a knock-out game ends in a tie, two extra halves are played. If these end in a tie as well, a penalty shootout determines the winner.

5 Competition Platform

5.1 Hardware

TBA

5.2 Software

Operating System:	Ubuntu 8.10 (Intrepid Ibex)
Dependencies:	ODE 0.9, Ruby 1.8, Java 1.6
Simulator:	Simspark 0.1.4 + Rcserver3D 0.6.4 (the release for Istanbul if available)

The OC must be notified as soon as possible if additional libraries are needed. A recent Java Runtime will be available. When this is done too late, the OC may rule that installation of the requested items disrupts the competitions and turn down the request.

6 Referee

During each game a referee is appointed to enforce the rules laid out in this document. In situations that are not handled by the rules, the referee should decide based on his/her common sense. The referee can be a member of the OC or a volunteer, from a team other than the teams of the match, who has full knowledge of the rules as deemed by the OC. During a match only one representative of each playing team is allowed to approach the referee. Decisions of the referee are binding and cannot be appealed during a match. If there is any complain about a game or a decision this should be brought to

the OC's attention as soon as possible, who will decide how to handle it after all games of the current round are finished. If the referee cannot decide in a situation, he can consult the OC who will give the final decision.

7 Match Preparation and Format

The matches will be started automatically by a competition managing system. Please provide `start.sh` and `kill.sh` scripts as required for the WM to be able to run and stop your agents. Teams will be given the opportunity to upload and test their agents on the competition system before the start of each round. When a round is started, it will no longer be possible to upload or make changes to the agents, until all matches of that round have been played.

A match is played by two teams of not more than six players. A match may not start if either team consists of less than two players. Each match consists of two halves of five minutes each. After the first half the teams switch sides.

The following applies in case of problems related to faulty programming of an agent (i.e. an agent's program gets disconnected or the agent clearly shows unnatural behavior):

- If this occurs in the first 30 seconds of the match, the match will be restarted up to 3 times. In the case of unnatural behavior, the team's representative is responsible of notifying the referee who will make the binding decision whether to restart the game on his own discretion.
- If the problem persists, the team's representative can ask the other team's representative for a 2 minute time-out to fix the problem.
- If the problem still persists, or if it occurs after the first 30 seconds of the match the game will continue. If due to the problem the team ends up with less than the minimum amount of players, the match will result in a win by the average score against this team but at least 1:0.

8 Game Play

1. Kickoff: Goals scored directly from the kick off are not accepted, the ball must first exit the middle circle before a shot at the goal can be made.
2. Goalkeeper: The player with uniform number 1, if available and only this player, will be designated as the goalkeeper.
3. Handling the ball: Handling the ball involves a deliberate act of a player making contact with the ball with his hand or arm, as decided by the referee on his own discretion. Handling the ball is penalized with a free kick to the opposing team. The goalkeeper can not be guilty of a handling offense when his hands are within his own penalty area.

4. Obstructing the ball: Obstructing the ball involves use of a players body, arms or legs to prevent progress of the game, which includes covering the ball, carrying the ball, holding the ball between arms or legs and lying in front of the goal in an attacking situation. Deliberately obstructing the ball, as judged by the referee, for longer than 10 seconds is penalized with a free kick to the opposing team. Unintentional obstruction of the ball for longer than 10 seconds is ended by a drop ball by the referee.
5. Illegal defense: At any time during the match, no more than 3 players of a team may be inside of their own penalty area. If a 4th player enters the penalty area, it will be placed outside of the field. When the last to enter is the goalkeeper, the player furthest away from the own goal of the three that were already in the penalty area will be placed outside of the field instead.
6. Crowding the ball: Crowding of the ball when an opponent is near (within 0.8m of the ball) is illegal. If two players of one team are within a circle with radius 0.4 m. of the ball, the furthest of these two is repositioned. If three players of one team are within a circle with radius 1 m. of the ball, the furthest of these three is repositioned.
7. Immobility: Players that have been immobile or fail to stand up for too long will be repositioned. The goalkeeper will be repositioned after 30 seconds of immobility, or after failing to stand up for 60 seconds; other players will be repositioned after 15 seconds of immobility, or after failing to stand up for 30 seconds.
8. Penalty shots: During penalty shots, each team only has a single player in the field: the goalkeeper for the defending team and a striker for the attacking team. Each penalty shot starts with a kickoff. The attacking team gets 45 seconds to attempt to score. The goalkeeper of the defending team has to stay within his penalty area the whole of this time. When penalty shots are used to decide a tied game, each team gets five penalty shots.
9. Output: Agents should not print excessive amounts of data to standard out, standard error or to files; i.e. do not print data every time step. Also, during testing between rounds, refrain from outputting excessively, as it can strongly affect network performance.
10. Fair play: Games should be played according to fair and common sense understanding of soccer and to restrictions imposed by the virtual simulated world of the 3D soccer simulator. Circumvention of these is considered violating the fair play commitment and its use during the tournament games is strictly taboo. Violation of the fair play commitment play includes, but is not limited to, for example:
 - Using another team's binary in your team

- Jamming the simulator by sending excessive commands per client
- Direct communication between players by using other communication means, such as inter- process communication
- Manipulating competition machines or restarting them intentionally

Any of these is strictly forbidden. Other strategies might be found violating the fair play commitment, after consultation with the OC. However, we expect it to be pretty clear what a fair team should be like. In particular, the destructive disruption of opponent agent operation or the gain of advantage by other means than explicitly offered by the simulator counts as not fair play. If you are in doubt of using a certain method, please ask the OC before the tournament starts. If a team is found to use unfair programming methods during the tournament, it will be immediately disqualified.

9 Fallback rules

The organization committee will do its best to make games possible with the amount of players decided for Istanbul. However, if any reason does not allow to run those games generally smoothly we might fall back to run games with less players. The final decision on if the non generally smoothly case is present is up to the organization committee. This means that you should be prepared to run games up to 11 players!

The server version for Istanbul will hopefully be released early enough, but might contain bugs as any newly released software might do. If this is the case during competition, we will first try to remove the bug or work around it. In the most severe case such a bug might prevent us from playing sensible games with the new server version. As a last option we have to consider to use last year's server version 0.6.3 and less players. You can help to avoid this case by testing the latest server version with your team now and report bugs to sourceforge, the technical committee or the mailing list.