RoboCup2003 Official Rules
for the Online Coach Compeition
Revision 3

The RoboCup2003 Simulation League Organizing Committee

June 28, 2003

Introduction

This document contains the official rules for the coach competition at RoboCup 2003. While we will try to cover all cases, if unexpected events do occur, the organizing committee will seek input from the participants and then make a decision. However, once the committee has made a decision, that decision is final.

I Entrant Requirements

This section describes the requirements for a coach to participate, and for a team player to be a valid coachable agent.

I.1 Coach Requirements

An automated coach to participate in the coach competition must satisfy the following criteria. Any violation will result in disqualification.

(a) The coach must communicate using the coach language (version 8/9 only) defined by the server version used by the team competition.

(b) The coach must not use any `freeform` messages during the coach competition.

(c) No heterogeneous player substitutions can be performed by the coach (heterogeneous playes will be turned off). Substitutions of the default player type to refill stamina are allowed.

(d) Coaches are *not* allowed to copy messages that other coaches have used in past games at RoboCup 2003.

I.2 Team Player Requirements

A valid coachable team player must satisfy the following conditions:

(a) The player must understand and make a good faith effort to execute commands given in the standard coach language, version 8 only.

(b) The player is allowed to have its own behaviors in absence of coach advice. However, the player should on average ignore no more than 10% of the advice it is given.

(c) If the coach gives conflicting advice about what to do in a situation, the player is free to choose any method to choose which advice to follow.

(d) In particular, the player must be able to parse and execute all language utterances listed at `http://www.cs.cmu.edu/~pfr/soccer/clang_corpus.html` as of June 16, 2003.

(e) The players should use no `say` commands.

Note that in order to participate in the coach competition, one does *not* need a provide a team that understands the coach language. However, as described in Section II.2, the coachable team will come from the contributions from the participants.

II Choice of Teams

This section describes how the teams which will be playing will be chosen.

II.1 Choosing Fixed Opponents

(a) Before the competition, the organizing committee will solicit suggestions for fixed opponents from previous years of competition. The committee will filter these suggestions, and insure that the teams chosen will run on the competition machine.

(b) Once at RoboCup2003, the committee will, with suggestions from the coach competition participants, pick additional teams participating in the competition to act as fixed opponents.

(c) The committee will announce the set of fixed opponents to be used approximately 24 hours before the start of the coach competition.

(d) Coach teams will be allowed to analyze the logfiles of the chosen teams.

(e) The actual fixed opponent(s) used for any round or group will be chosen randomly.

II.2 Choosing Coachable Teams

(a) The team being coached will be a combination of players contributed by different research groups.

(b) Three weeks before the competition (June 11, 2003), the committee will solicit contributions of player from teams.

(c) The committee will test the players to insure a minimal level of conformance and understanding of CLang.

(d) Two weeks before the competition (June 18, 2003), the committee will verify that the players are acceptable and release the binaries to all participating coach teams. If problems arise, the committee reserves the right to remove players from use.

(e) The players will be used in as equal numbers as possible. The assignment of agents to numbers will be fixed and announced before the competition.

III Match Structure

This section describes the basic unit of the coach competition, where are group of coaches are brought together, play games, and are then ranked.

III.1 Playing a Single Game

Each game in the coach competition will be structured as follows.

(a) An opponent and coachable team will be chosen (see Section II).

(b) An online coach, call it C, will coach the coachable team.

(c) The server is started by the referee. The options `team_l_start` and `team_r_start` will be used to start up the coachable team on the left side and the fixed opponent on the right side.

(d) The coach C will be connect by the group C represents. The referee will wait until the the group indicates the coach is ready.

(e) A full game will be played (6000 cycles), with no extra time (i.e. ties are allowed).

III.2 Group Format

(a) The competition will proceed by groups of coaches competing against each.

(b) In each group, the same fixed opponent and coachable team will be used.

(c) Each coach will play one (or more) games following the procedure in Section III.1. If time allows, multiple repetitions of games will be played. If multiple repititions are played, the group for the coach team will *not* be allowed to change the coach code or configuration between games.

III.3 Ranking Coach Performance

(a) If multiple repetitions were played of a given game, the mean score differencee will represent the result of that coach-team-opponent set.

(b) Coaches will be ranked first on the score difference.

(c) If there is a tie, the procedure below will be used until the first coach has been ranked. At that point, the tie-breaking procedure will start over with the remaining coaches.

(d) If no coach involved in the tie will be eliminated (and it is not the final round), then the following game statistics will be used:

   i. The score difference of the best game played with each coach.
   ii. The score difference of the worst game played with each coach.
   iii. Mean goals scored by the team with each coach.
   iv. Goals scored by the team in the best game played with each coach.
   v. Goals scored by the team in the worst game played with each coach.

(e) If a coach involved in a the tie will be eliminated, it is the final round, or the tie can not be broken with the statistics in III.3.d, the following tie-breaking procedure will be used.

   i. The criteria described in III.3.d will be used to provide a seeding of the teams. If there are any ties, they will be broken by coin flips.
   ii. Based on that seeding, a single elimination tournament will be played.
   iii. For each game, the same coachable team that was used for the group will play both sides. One coach will coach each side.
   iv. The game will be only one half (3000 cycles), and then sudden death after that.
   v. If the game continues for 12000 cycles, it will be called a draw.
   vi. In case of a draw, if the teams can be ranked using the statistics in III.3.d, those will be used to break the tie. Otherwise, a coin flip will be used.

IV Game Scheduling and Tournament Structure

The schedule and exact structure will be determined closer to RoboCup. In general, coaches will be placed into groups (with 4-5 coaches), play the games described in Section III, then ranked. This will be repeated until a single group is used and all remaining teams are ranked.