Aria Coach Soccer Simulation Team Description

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Abstract. This paper describes the most important features of current working coach program of the Aria Soccer Simulation Team and futures works which this team aim to do. Previously, this team participates successfully in 2D and 3D soccer simulation environment. This team is prepared to participate in coach competition in addition to 2D and 3D league.

1 Introduction

Aria Soccer Simulation Team started its research on December 2001. Previous experiences of this team are limited to 2D and 3D soccer simulation environment. This team is prepared to participate in coach competition in addition to 2D and 3D league. New Coach Soccer Simulation Leagues provides a suitable test-bed for testing various problems in opponent modeling. We think that most of these problems can be model as a classification problem.

This paper is organized as follows. Section 2 briefly describes what has been done for coach competition. Section 3 is devoted to future researches aimed to be performed by this team. This paper is concluded in section 4 which contains the conclusions.

2 Aria Coach Program

For the first time, Aria will participate in this competition; therefore, it is required to use a coach program which is able to have basic capability to analysis the matches, communicate with coachable agents, and give the necessary advices to them. We use Online Coach Source Code released by Trilearn2003 team as the base code and develop it to be compatible with Coach League[1, 2]. Our current coach program supports the following features:

- Receive and send the message with Soccer Server
- World Model creation
- Creation of high-level memory from past situations of the game.
- Determining the passing skills and giving the statistical report.
- Advising the coachable agents by CLang.

One of the most important features of new coach league is pattern play [2] and detecting that pattern. We have done a few works for determining the patterns, so our coach is able to detect some patterns provided by the organizers correctly.

3 Future Works

We believe that most important problems in the new structured Coach Environment can be modeled as classification problems. In this regard, we can solve the problems with various classifiers which exist. We are more interested in using below classifier to solve the problems:

- Bayes Classifier [3].
- Decision Tree Learning [3]
- Parametric Classifiers [3].

4 Conclusions

Coach competition with new structure is suitable test-bed for solving problems of opponent modeling. We think that these problems can be solved using classic classification method. Aria team wants to consider these classifiers in a new structured Coach Competition.

References

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