

Open Challenge Description

Dutch Nao Team

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In this challenge we plan to demonstrate the importance of switching between strategies, and suggest criteria to switch. The research is inspired by the addition of a coach robot by this year's new rules. The coach will function as a centralized decision node in the network for strategy changes.

Our coach robot can choose between three strategies: offensive, defensive and normal. Within these three strategies the individual field players can each perform one of three roles. These roles are: striker, defender and keeper. Each strategy will consist of only one keeper, thus the remaining field players will be divided into the roles: striker and defender. The offensive strategy will consist of four strikers each with a different distance from the ball. The normal strategy will consist of two strikers and two defenders. The defensive strategy will consist of four defenders each arranged with a different position at their teams half. The coach will decide each strategy with different facts about the game which are sent from the game controller.

The sixth, coach robot will analyze the strategy of the opponent and will decide the most effective strategy against the opponents strategy. The coach will discover what the strategy of the opponent is by looking at the information sent by the game controller. The classification of information sent by the game controller will assist discovering the strategy of the opponent. Thus the coach will recognize the strategy of the opponent as one of the three strategies described within this section.

During the demonstration we will show that the coach can effectively inform player robots about which global strategy to use, based on information of the game controller. This will be shown by demonstrating the coach, and stating the effectiveness of the global strategies given the analysis of the opponent's team by the coach robot.