Technical Challenges for the RoboCup 2011 Standard Platform League Competition

RoboCup SPL Technical Committee

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1 Introduction

The RoboCup 2011 Standard Platform League Competition is going to have only one technical challenge, which is the Open Challenge.

The team with the top score in the challenge will receive 28 points, each position thereafter will receive 1 less point; i.e. 1st = 28pts, 2nd = 27pts, 3rd = 26pts ... 28th = 1pt. In the case of a draw, each team will receive the average of the points allocated to these positions; e.g. if three team tie for 2nd, they will receive $(27 + 26 + 25)/3 = 26$ points. Teams not competing in the challenge will receive 0 points, also if a team competes but fails to score a point (or receive a vote) they will receive 0 points again. The team with the highest score after the challenge is deemed the challenge winner.

The challenge will use the 2011 field and the 2011 rules will apply.

2 The Open Challenge

This challenge is designed to encourage creativity within the Standard Platform League, allowing teams to demonstrate interesting research in the field of autonomous systems. Each team will be given three minutes of time on the RoboCup field to demonstrate their research. Each team *should* also distribute a short, one page description of their research prior to the competitions. The winner will be decided by a vote among the entrants. In particular:

- Teams must describe the content of their demonstration to the technical committee at least *four weeks* before the competitions.

- The demonstration should be strongly related to the scope of the league. Irrelevant demonstrations, such as dancing and debugging tool presentations are discouraged.

- Each team may use any number of Aldebaran Nao robots. Teams must arrange for their own robots.

- Teams have three minutes to demonstrate their research. This includes any time used for initial setup. Any demonstration deemed likely to require excessive time may be disallowed by the technical committee.

- Teams may use extra objects on the field, as part of their demonstration. *Robots other than the Naos may not be used.*

- The demonstration must *not* mark or damage the field. Any demonstration deemed likely to mark or damage the field may be disallowed by the technical committee.

- The demonstration may *not* use any off-board sensors or actuators, or modify the Nao robots.

- The demonstration may use off-board computing power connected over the wireless LAN. This is the only challenge in which off-board computation is allowed.

- The demonstration may use off-board human-computer interfaces. This is the only challenge in which off-board interfaces, apart from the Game Controller, are allowed.

The winner will be decided by a vote among the entrants using a Borda count (`http://en.wikipedia.org/wiki/Borda_count`). Each participating team will list their top 10 teams in order (excluding themselves). The teams are encouraged to evaluate the performance based on the following criteria: technical strength, novelty, expected impact and relevance to RoboCup. At a time decided by the designated referee, within 30 minutes of the last demonstration if not otherwise specified, the captain of each team will provide the designated referee with their rankings. Each ranking is converted to points based on the scoring criteria mentioned in Section 1. Any points awarded by a team to itself will be disregarded. The points awarded by the teams are summed and the team with the highest total score shall be the winner.