

General Framework for Behavior and Coordination Development: from Simulation and MSL to SPL

Portuguese Team
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The Portuguese Team is a joint effort from the University of Aveiro, University of Minho and University of Porto, and joins researchers from different robotic soccer teams: FC Portugal (2D and 3D Simulation League) and CAMBADA (Middle Size League). In this context, in order to integrate the contributions of these research groups, and pursuing a line of research that existed before the Portuguese Team constitution, we have developed a general framework for robotic soccer coordination that can be used to define the team strategy in any of these leagues. This framework is based on the concepts of tactic, formation, player types, flux and setplays. Also, as the current robot model used in the 3D Simulation League is based on the Aldebaran NAO, we integrated the behavior development and execution modules of our agents for 3D simulation and SPL.

In the Open Challenge we will demonstrate the integrated development and execution of a behavior in the real NAO and in the simulated NAO. We will also present the general framework for coordination in different robotic leagues and demonstrate its execution in the 3D Simulation League, MSL League and in the SPL League.

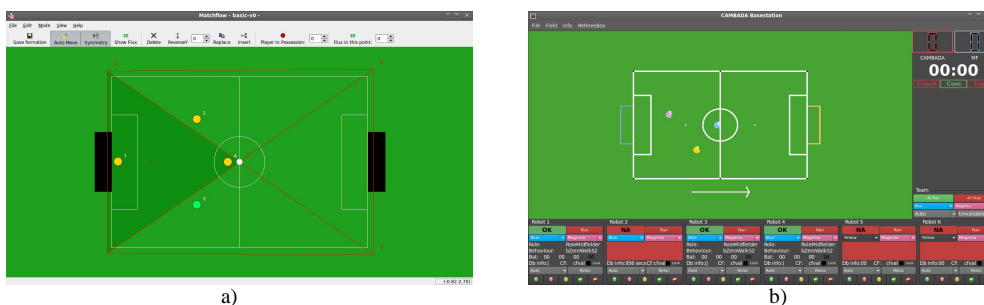


Figure 1: a) Formation Specification using Delaunay Triangulation b) Our SPL monitoring and control application