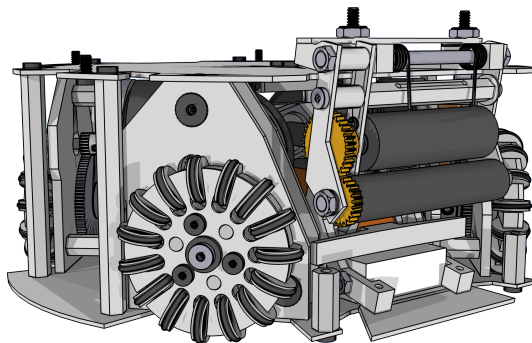


Development of a Small Size RoboCup Team

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Abstract. The RoboCup Small Size Robotic Soccer League exists to drive research in robotics and artificial intelligence and the systems which compose those fields. In the Small Size League, teams of five fully autonomous robots play soccer with an orange golfball in two fifteen minute halves. Due to size restrictions (the robots must be 180 mm in diameter), significant integration and power issues, which are rarely seen in traditional robotics, must be overcome. Additionally, due to the fast-paced fully autonomous nature of the game, sophisticated control systems must be developed including systems such as path planning, obstacle avoidance, strategy and artificial intelligence systems.

In this work, the development of a robotic system to compete in the RoboCup Small Size Robotic Soccer league is described. This work describes a novel combination of subsystems including mechanical, electrical and software which will hopefully prove successful in this year's competition. In particular, this work describes the development process and offers some insight into the decisions and tradeoffs which were made.