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An Overview of Swarm Robotics: Swarm Intelligence Applied to

Multi-robotics

Abstract

Technology seems to be developing at a bewildering rate across the board these days. New smartphones appear all the time, more sophisticated apps emerge routinely, and computers continue to evolve. But aside from the innovations are used to seeing daily, the field of robotics is advancing at a similar rate: Robotics is a domain in artificial intelligence that deals with the study of creating intelligent and efficient robots. Robots are aimed at manipulating the objects by perceiving, picking, moving, modifying the physical properties of object, destroying it, or to have an effect thereby freeing manpower from doing repetitive functions without getting bored, distracted, or exhausted. As an emergent research area by which swarm intelligence is applied to multi- robot systems; swarm robotics (a very particular and peculiar sub-area of collective robotics) studies how to coordinate large groups of relatively simple robots through the use of local rules. Swarm robotics focuses on studying the design of large amount of relatively simple robots, their physical bodies and their controlling behaviors. Since its introduction in 2000, several successful experimentations had been realized, and till now more projects are under investigations.