

ABSTRACT

FAST ROBOT SWARM DEPLOYMENT PROTOCOLS

There has been increasing interest in the last few years in deploying a swarm of robots in a fast and efficient manner. Since the robots may be used without the supervision of human operators, it is important to be able to deploy them without intervention from human operators. In this thesis we propose a deployment algorithm for such purposes. We propose an architecture where the robots communicate with each other and properly deploy without the need for centralized control. Each robot is capable of determining its proper position by calculating the distances from its neighbors. We will describe our work on the deployment algorithm and also provide results from the various experiments we performed to evaluate our algorithm.

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