Abstract

Groups of robots can solve problems in fundamentally different ways than individuals while achieving higher levels of performance. This paper investigates the application of swarm intelligence principles for the co-operative behaviour of autonomous collective robots. Using swarm intelligence technique robots are able to get their optimized path during navigation. In the task of chain based path formation of swarm robots, a chain of multiple robots is formed between nest and prey for some specified work. Multiple robots randomly move to search the Nest and gather at Nest, after perceiving the Nest robots can self organizing into chain and again move randomly to search the Prey. In this paper I have proposed a method for the movement of swarm robots i. e. Spiral Move, which takes less time compare to random search.

References

Selforganized strategies to find your way home. Swarm Intelligence, 2(1):1–23.
  

Index Terms

Computer Science  Artifical Intelligence

Keywords

Swarm Robotics  Path Formation  Swarm Intelligence  Spiral Move  Nest  Prey