Abstract

Decentralized multi-agent approach is a promising research field particularly in the area of performance improvement by handling task allocation and communication time. Some recent research has focused on developing the learning process to be better suited for specific problems; other efforts had proven that a generalized solution is better off especially when there is no global controller. This paper presents a better suited multimembered evolution strategy to agent reasoning with an improved method of pre-assigning initial values to agents. We show through computer experiments that agents using the presented method reach a stable state in a faster pace than other multi-agent systems, although after a stable state is reached the improvement- we are presenting- effect will be a little limited until the system reaches an unstable state again.
Task Allocation in Distributed Artificial Intelligence using Boids Model

Bo An, Automated Negotiation for Complex Multi-Agent Resource Allocation, (Dissertation Submitted to the Graduate School of the University of Massachusetts Amherst in partial fulfillment of the requirements for the degree of PhD, 2011, pp. 2-15, 138-167, 202.


Raphen Becker, Analyzing Myopic Approaches for Multi-Agent Communication, Computational Intelligence, Volume 25, Number 1, Blackwell Publishers, 2009, pp. 44–45.


Index Terms

Computer Science

Artificial Intelligence

Keywords

Decentralized multi-agent approach MAS evolution strategy