Abstract

Software testing is one major part of software development life cycle (SDLC) and thus tester need to have good testing algorithms in order to test the software correctly and efficiently. Ant colony optimization technique is a meta-heuristic technique which was first proposed by Dr. Marco Dorigo in his PhD thesis in 1992. He proposed a technique which was completely based on the behaviour of ants while taking their food to their colony. In this paper we put forward an extended approach of ant colony method which can be helpful in providing a better path sequence from shortest to longest path, based on the probability calculated using the extended formula. With the help of results we prove that the proposed formula fulfil the requirements.
Extended ACO Algorithm for Path Prioritization

- wiki/ant_colony_optimization
- ACO based on ASRank and MMAS for VRPSPD, T zhang 2007.
- "An Improved Algorithm for Basis Path Testing"; Du Qingfeng Dong Xiao ©2011 IEEE
- An Improved Method of Acquiring Basis Path for Software Testing Zhang Zhonglin, Mei Lingxia IEEE-ICCSE 2010

**Index Terms**

Computer Science Software Engineering

**Keywords**

Software testing ant colony optimization algorithm path sequence Cyclomatic complexity
probability