Abstract

The notion of ordered walks is acquainted with a depth-first search (DFS) that does not rely on topographical or virtual coordinate information and is much more efficient than meager random walks. The welfare of using DFS as the building block of the signalling in MANET routing protocols are epitomized by the introduction of the Ordered Walk Search Algorithm (OSA) as a replacement of flooding, which is used as part of the Ordered Walk with Learning (OWL) protocol. Aim to take advantage of the smaller time complexity of BFS and combine it is the low communication complexity of DFS to further improve the efficient of the search through the use of known topology information. The uses of multiple DFS can lead to a quicker discovery of OSA. The present the ordered walks with learning (OWL) routing protocol, which use DFS to establish and repair paths from the sources to the destination with minimal signalling overhead and fast convergence. OWL performs one or multiple ordered walks to search for destination. Simulation experiments are used to compare the delivery and end-to-end delays of OWL and AODV, but with significantly less overhead. The use of ordered walks is a promising tool in achieving limited-signalling routing in MANETs.

Index Terms

Computer Science

Wireless
Keywords
Mobile Ad-hoc Networks  Ordered Walk with Learning protocol  Ordered walk
Search Algorithm
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