Abstract

The proposed Enhanced Topology Aware Routing (ETAR) procedure efficiently maps a network topology into a low-dimensional virtual coordinate space. The hop distances between node pairs are preserved. The node is categorized by a coordinate vector. This vector contains hop distances to the anchor nodes. Therefore ETAR can assist greedy forwarding to find the precise neighbor one hop closer to the terminus by eliminating the local minimum problem and attain high success ratio of packet delivery and throughput without location information. Creating VCs involve a single flooding for each anchor and each collecting coordinates from a set of small number of random nodes hence reduces the average end to end delay, energy and power. Further, embedding a network topology based on the metric of Probable Communication Count (PCC) improves the routing quality.
References


Index Terms

Computer Science
Wireless
Keywords