Abstract

The integration of the internet and ad hoc mobile host can be used to eliminate dead zones in the wireless network, and can also be used to extend the coverage of wireless networks. This paper utilizes extended Ad hoc On Demand Distance Vector (AODV) for interconnection of MANET with Internet. An approach is presented to reduce the search cost; such as route discovery delay (RDD) and routing overhead (RO) based on modification in TTL value for network wide search. Moreover, this paper not only simulates and compares the existing and proposed approach for optimization in search cost but also derive search strategies (i.e. sequence of TTL values). We used a dynamic programming formulation with which optimal search strategies can be derived that minimizes the expected search cost associated with packet transmissions. Thus, the mathematical formulation justified the simulation results.

References

- D. B. Johnson, D. A. Maltz, Y. Hu and J. G. Jetcheva. "The Dynamic Source...
Optimization in Route Discovery Delay for Integrated MANET with Internet using Extended AODV


- Ali Hamidian, Ulf Körner and Anders Nilsson; Performance of Internet Access Solutions in Mobile Ad Hoc Networks; Department of Communication Systems Lund University, Sweden
- WU Lijie, Qian Xuezhong, Dou Weijiang; Routing protocols for prolonging network lifetime based on AODV; Computer Engineering and Applications, 2007, 43 (19).
- Dan Yu and Hui Li; A Model for Performance Analysis of a Mobile Ad Hoc Networks; Siemens AG, ICM N PG SP RC FR, Gustav- Heinemann – Ring 115, 81730 Munich, Germany.
- J. J. Garcia-Luna-Aceves, Rolando Menchaca-Mendez; PRIME: An Interest-Driven Approach to Integrated Unicast and Multicast Routing in MANETs;
IEEE/ACM Transaction on Networking, VOL. 19, NO. 6, December 2011

Index Terms

Computer Science
Mobile Networks

Keywords
MANET AODV Extended AODV Search strategy Integrated network