Abstract

Fuzzy Cost Based Power Aware QoS Routing (FCPAQR) protocol proposed to select an optimal path by considering multiple independent QoS metrics. Fuzzy inference rule which is used to calculate the QoS based fuzzy cost of each link to forward the data packets effectively and efficiently. Fuzzy cost is calculated based on various QoS Constraints. QoS constraints can be classified as Time Constraint (Delay and Jitter), Space Constraint (System Buffer), Frequency Constraint (System Bandwidth) Reliability Constraint (Error rate) [9]. Link Expiry Time(LET) and Energy Level are also additionally taken into account. Considering multiple QoS Constraints provide better result than taking single constraint into account.

References

- Venugopalan Ramasubramanian, Zygmunt J. Haas and Emin Gun Sirer, &quot;SHARP: A Hybrid Adaptive Routing Protocol for Mobile Ad Hoc Networks&quot;., MobiHoc&amp;apos;03, June 1–3, 2003, Maryland, USA.
- Prasant Mohapatra, Jian Li and Chao Gui, University of California, &quot;QoS in Mobile Ad hoc Networks&quot; IEEE Wireless Communications June 2003 Pages 44 – 52.
- Aura Ganz ,&quot;Quality Of Service Provision In Mobile Ad Hoc Networks&quot; For TACOM Seminar January 14, 2002 by University Of Massachusetts, Amherst.
- B. Sun, C. Gui, Q. Zhang, H. Chen: Fuzzy Controller Based QoS Routing Algorithm with a Multiclass Scheme for MANET, Int. J. of Computers, Communications & Control, ISSN 1841-9836, E-ISSN 1841-9844 Vol. IV (2009), No. 4, pp. 427-438

Index Terms

Computer Science
Mobile Networks

Keywords
Routing  Fuzzy logic  QoS metrics