Abstract

The network in which different type of devices such as PDA, laptop, tablets, cell phone etc are established a network for dispense information, communication and distributing files between nodes is called heterogeneous wireless network. In the heterogeneous wireless network the important problem is behavior of nodes . the nodes between sources to destination not only different hardware, energy capabilities but also may pursue different goals. The entrusted (malfunctioned) nodes drop the packet between source to destination and breaks the routing path . due to faulty hardware or software and responsible for disturbing the data transmission in the network . Here, we develop fuzzy rule based secure and reliable routing protocol for heterogeneous wireless network we used AODV as a based routing protocol so that in future if new nodes are inserted or any node is deleted in the network then our network does not disturb
we also used ESTAR protocol for finding the trusted based and energy aware nodes. ESTAR not only evaluates the node competency as well as reliability in relaying the packet with multidimensional trust values. We used this highly trusted node which has sufficient energy to reduce probability of breaking the routes due to the ESTAR routing protocol. the packet delivery ratio and routes stability is improved the trusted value of node calculated by the ESTAR based on the parameter of number of packets, percent of sessions and the node ability to keep route connected which is theoretically possible but practically this wireless network parameter do not have a single valued but a set of value from which a decision has to takes place therefore we pass this trusted value to fuzzy ruled base and get practically possible trust nodes.

References

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A Statistical Analysis of Various Routing Protocols in WSN


Index Terms

Computer Science

Wireless

Keywords

Aodv, Estar, Fuzzy Ruled Base Engine, heterogeneous Network.