Abstract

Wireless Ad hoc Networks: is an interconnection of nodes which are mobile, have wireless links with temporary connections and without any centralized control. All this properties makes the network dynamic in nature. To communicate with each other over distance, nodes either can transmit directly or through intermediate nodes, which can relay the data to the destination,
but such paths are contemporaneous in such networks. To improve the performance of such network, nodes must remain available to route and forward the data packets of other nodes. Since wireless nodes are energy constrained, it may not be in the best interest of a node to always accept relay requests. On the other hand, if all nodes decide not to expend energy in relaying, then network throughput will drop dramatically. Both these extreme scenarios (complete cooperation and complete noncooperation) are inimical to the interests of a user. Mobile ad-hoc networking works properly only if the participating nodes cooperate in routing and forwarding. However, it may be advantageous for individual nodes not to cooperate. In this paper, we consider selfish node behavior in ad hoc networks and discuss trust and many reputation mechanisms that will stimulate cooperation between nodes. In this paper, we address the problem of service availability in mobile ad-hoc WANs. We present a secure mechanism to stimulate end users to keep their devices turned on, to refrain from overloading the network, and to thwart tampering aimed at converting the device into a “selfish” one.

Reference

Different Approaches on Cooperation in Wireless Ad Hoc Networks


Index Terms

Computer Science

Wireless

Key words

Cooperation

reputation wireless ad hoc networks

fairness

robustness

trust