Abstract

Wireless nodes (Laptop, PDA's and Mobiles) are assumed to have transmission power with different discrete level and different control to the limit of power of usage. The level of power available is one of the main concepts which affect all of ad hoc wireless networks. Since, all of these networks are constructed without any infrastructure, where it based on the mobility of nodes that prevents the usage of any fixed infrastructure such as power cables. Hence, the power consumption is an important factor which affects the network life-time and transmission range. For that, the power consumption rate must be distributed for every node and the overall power of transmission must be minimized for each connection request, also the congestions must be decreased. A clustering scheme is used in the adaptation of MANETs to be energy efficient. For this motivation, this paper presents a simple scheme which maintains the idea of Cluster Head election that allows mobile nodes to automatically create best clusters that use an optimal scenario of cluster formation and maintenance which conserve the power energy consumptions, and increase lifetime of ad hoc wireless network's devices. The main idea is to partition the network into set of clusters, and also find the best scale of clusters according to power level of all nodes in each cluster.
References


Index Terms

Computer Science

Wireless
Keywords
Power consumption  Clustering  MANETs  Cluster Head  Ordinary Node and Network Lifetime