



Figure 5.10: Power of the node with Time

From Figure 5.10 which is the illustration of Power, No of nodes alive with respect to simulation-time of the network, we can observe that the power consumed is more in LEACH-C than all the other protocols. ERP performs better than other protocols in terms of power Since ERP protocol lets the power consumption of the network be uniformly distributed in each node, the interval between the deaths of the first node and that of the last node is so short. ERP degrades more slowly than other three protocols in most cases and afterwards it will decrease sharply.

6. Conclusion

In the proposed Efficient Routing Protocol (ERP) for sensor networks, a node independently makes its decision whether or not to compete as a cluster head. After the selection of the cluster heads, the non-cluster head nodes choose to join the closest cluster head and for a cluster. In order to reduce the power consumption, a cluster head, called the base station, is selected from among the other cluster heads as the only node to communicate with the sink node. The cluster head remote from the sink node sends the gathered data, in a multi-hop pattern, to the sink node. Moreover, in ERP protocol, the execution of a simple coverage algorithm helps to prolong the network lifetime with the increase in node density.

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