Abstract:
It is difficult to build a network with more number of nodes, especially when there is a requirement for a reliable rate of data transfer. It becomes further more cumbersome as the nodes involved in it are inexpensive wireless sensor nodes. The challenge now is, how to network large numbers of inexpensive wireless sensor nodes while maintaining a high level of network performance. To address this performance problem, Intel researchers explored the concept of heterogeneous networks. Wireless sensor networks are formed by small nodes or "motes" - tiny, self-contained, battery-powered computers with radio links that enable the motes to self-organize into a network, communicate with each other and exchange data. A data that hops from mote to mote across the network is referred as a multihop network. Some active sensors that can enter and exit the 802.11 highway at multiple interchanges (the XScale nodes) in order to bypass side roads (motes) are deployed. This enables faster trips across the network and results in improved performance.

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