

Intelligent autonomous Mobile Sinks for enhanced performance in a distributed sensor network

Within a wireless sensor network monitoring sensors need to be connected to sink nodes so that collected data can be routed to the outside world. There are problems with this technology, since multihop connections between the nodes to a static sink have variable energy requirements, and network lifetime is a key issue. Static sinks increase the total energy consumed in transmission and impact on network connectivity because the sensors close to the sink become heavy data routers. This research focuses on a method of intelligently repositioning the sink node to increase network lifetime and network connectivity. Intelligent methods such as dynamic power control and fuzzy logic are used to reposition the mobile sink to enhance the network's performance.

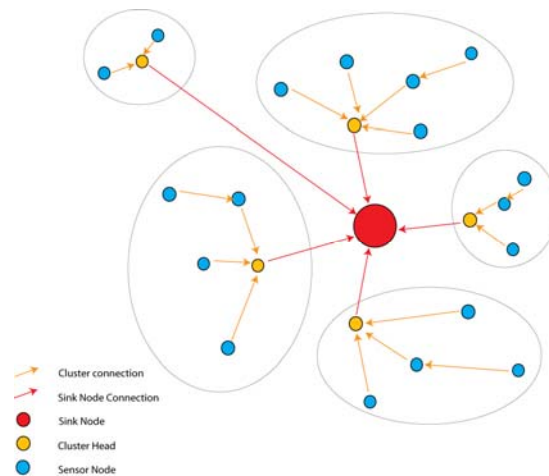


Figure 1: A standard sensor network using multihop transmissions

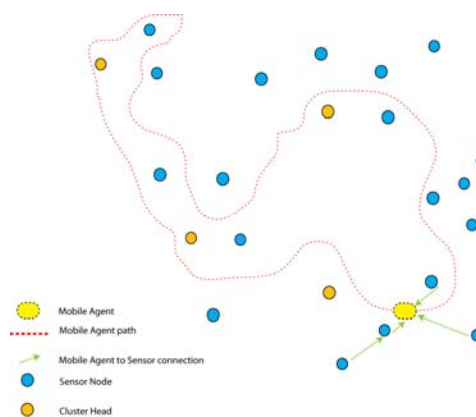


Figure 2: A mobile sink can dynamically reposition itself due to different attributes and network requirements