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## (57) Abstract :

Using LoRa and a lightweight dynamic clustering algorithm, a mobile data sink can be made wide-area WSNs that are connected to the Internet of Things ABSTRACT An Internet of Thingsconnected wireless sensor network can be used to monitor vast areas. Sensor nodes with low processing power and battery life are utilised in this application. Because a WSN is distributed and difficult to connect to from a distance, designing an energy-efficient WSN is more complex. In addition, it may be challenging to implement IoT applications with both low-power and longrange wireless communication. Most WSN topologies consist of a central data sink and a fixed number of nodes at a set location. Putting the majority of the control layer's work on lower hierarchical layers or a virtual intermediate layer shortens the network's lifespan due to the large number of processing and data transmission activities. For example, data latency and battery life could necessitate the separation of nodes. This could lead network nodes to lose contact with one another. You can avoid these concerns by implementing mobile data sinks that travel between nodes that aren't communicating. The goal of this project is to design, build, and enhance a data gathering system that will allow sensors to connect with the home base more simply while consuming less power overall. The use of this technology will also aid in the settlement of a number of challenges, including the delay imbalance and hotspot issues. The goal of this research is to determine whether the proposed technique performs well in a range of scenarios. Additional ongoing experimental work will give a thorough evaluation of cutting-edge applications such as civil transportation systems.

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