Cover Letter

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The article:

- **The type of the article:** Original research paper.
- **The title:** Multiple mobile sinks for quality of service improvement in large-scale wireless sensor networks
- **The type of the branch:** Cluster-based Routing Protocol; Energy Consumption; Quality of Service; Tradeoff; Multiple Mobile Sinks; Large Scale Wireless Sensor Network.

Motivation:

Our paper addresses a crucial challenge in the field of LS WSNs, which is the efficient and effective data collection from numerous sensor nodes spread across a wide area. The primary contribution of this paper is the proposal and analysis of using multiple mobile sinks to enhance the quality of service (QoS) in such networks.

Significance of the Paper's Findings:

The paper introduces the concept of using multiple mobile sinks simultaneously to address the limitations of both static and single mobile sink approaches. This approach offers several significant benefits, in terms of Enhanced QoS: By using multiple mobile sinks, the network can achieve improved QoS in terms of data delivery, reduced latency, and balanced energy consumption. This is particularly crucial for applications requiring timely and accurate data, such as environmental monitoring and disaster response.

The paper's contribution of utilizing multiple mobile sinks to enhance QoS in LS WSNs is significant due to its potential to overcome the limitations of existing approaches. By providing better tradeoff between energy consumption and QoS, this novel concept can greatly improve the overall performance and efficiency of data collection in WSNs, making it valuable for various applications in the domains of environmental monitoring, military applications, and more.

Why the manuscript fits the scope of the journal.

The manuscript titled "Multiple Mobile Sinks for Quality of Service Improvement in Large-Scale WSNs" is a suitable fit for the scope of the Sensors MDPI journal's Special Issue on "Wireless Communication Systems and Sensor Networks." This alignment can be explained based on how the manuscript's content and contributions align with the focus of the special issue and the broader objectives of the journal:

- **Relevance to Wireless Communication Systems**: The manuscript addresses the use of multiple mobile sinks to enhance the quality of service (QoS) in large-scale WSNs. This topic directly pertains to wireless communication systems, which involve the exchange of data among numerous wireless devices. The manuscript's emphasis

on mobile sinks and their role in improving data collection, routing, and aggregation aligns well with the special issue's focus on wireless communication systems.

- **Focus on Sensor Networks:** The manuscript's central theme revolves around WSNs, which are a vital component of the special issue's scope. Sensor networks are highlighted in the manuscript as the environment where multiple mobile sinks are deployed to optimize QoS. This emphasis on sensor networks and their role in data collection resonates with the special issue's focus on sensor networks.
- **Quality of Service Improvement:** The manuscript's primary objective is to improve the quality of service in WSNs. This objective directly aligns with the broader goals of the Sensors MDPI journal, which aims to publish research that advances the understanding and implementation of sensor systems, technologies, and applications. Enhancing QoS is a significant aspect of sensor network research and fits well within the journal's objectives.
- **Novel Contribution:** The manuscript introduces the concept of using multiple mobile sinks in sensor networks to address QoS challenges. This innovative approach aligns with the special issue's goal of featuring research that presents novel solutions, technologies, and methodologies related to wireless communication systems and sensor networks.
- **Applicability and Impact:** The manuscript's findings can have a practical impact on real-world applications that rely on WSNs. The special issue likely seeks research that has relevance and applicability, and this manuscript's exploration of improving QoS in sensor networks using multiple mobile sinks directly contributes to this aspect.

In summary, the manuscript's emphasis on improving QoS in WSNs using multiple mobile sinks, its alignment with the broader themes of wireless communication systems and sensor networks, its focus on innovation, and its potential for practical impact make it a strong candidate for inclusion in the Sensors MDPI journal's Special Issue on "Wireless Communication Systems and Sensor Networks."

Statement:

I am the undersigned corresponding author; I mention that the carried studies were in accordance with our institutional ethical committee, and we confirm that neither the manuscript nor any parts of its content are currently under consideration or published in another journal.

All authors have approved the manuscript and agree with its submission to (Sensors Journal of MDPI).

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author
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