**Developer report**

**Title: LEACH PROTOCOL ENHANCEMENT FOR INCREASING WSN LIFETIME**

**Title ID:** Here we need to mention Title ID of the Project.

**Objective of the Project**: The S-LEACH is the proposed protocol enhances and improves the network life time, data transmission and energy-efficiency .

**Development Procedure:**

We suggest a new algorithm for extending the network's lifetime by choosing Cluster Head (CH) and Secondary Cluster Head (SCH) during each round's sensor setup process. According to previous studies, the shorter the gap, the better. Among CH and BS, the BS has a longer lifespan and is more energy consuming. The closest node to the BS is designated as CH, and the closest node to the CH is designated as SCH, taking into account the energy and distance parameters of the nodes. If the CH dies, according to this theory, The contact between the sink and the cluster will not be cut off. The dead cluster head is replaced by a secondary cluster head, declares itself to be a cluster Head. Rather than that, the cluster

continuously connecting the sink as long as the active node alive in the cluster.

**Execution Procedure:**

The 100 Nodes are deployed randomly in the 100 \* 100 \*m^2 WSN sensing area size, do is calculated and then Setup Phase starts the Election of Cluster Head is done, that is the node which is closest to the Base Station is chosen as CH ,if the Energy of the CH becomes zero then the node which is closest to the CH becomes SCH(Secondary Cluster Head)and then the Steady State Phase starts where Data transmission is done between nodes to CH and Ch to BS, then the determination of Alive Nodes and the Energy Consumption for nodes are determined.

**Extension Idea:**

As future work, it would be worth to apply the proposed S-LEACH algorithm in different WSN routing protocols to minimize network traffic and the best path for data to travel from cluster to sink.