

## **A MULTI PATH ROUTING PROTOCOL BASED ON LINK LIFETIME AND ENERGY CONSUMPTION PREDICTION FOR MOBILE EDGE COMPUTING**

### **ABSTRACT**

During mobile edge computing, due to the movement of nodes and the exhaustion of node energy, link failure occurs thus reducing the network lifetime in the mobile ad-hoc network. When the route fails, because the single path protocols need to restart the route discovery process, the delay of the network is greatly increased. Therefore, the multi path routing protocol is proposed, saving the cost of route discovery. In this project propose an ad hoc on demand multi path distance vector (AOMDV) routing protocol based on link lifetime and energy consumption prediction (named LLECP-AOMDV) for mobile edge computing. In the route discovery phase, the energy grading strategy is adopted. When the node energy is lower than the threshold, it no longer participates in the route discovery. In the routing selected phase, the path is selected based on the lifetime of the route link and the minimum energy consumption of the route. According to energy consumption, packet delivery rate, end to end delay performance indicators, we evaluate the comparison results. The result shows that under most network performance indicators and parameters, the proposed LLECP-AOMDV is superior to the other three protocols, which improves the network lifetime, reduces the node's energy consumption and the average end to end delay. The protocol is very useful for mobile edge computing.