**ABSTRACT**

In wireless sensor network, devices or nodes are normally battery powered devices. These nodes have imperfect quantity of primary energy that an enthusiastic at dissimilar rates, depending on the power or energy level. A modified centralized cluster based cluster-head selection is a primary issue in existing representative clustering methods such as M-LEACH and SEDC, cluster heads are selected with a optional likelihood in a distributed manner. So, there are huge deviations of the amount of clusters and size for each cluster at each round throughout network lifetime. In order to conquer issues of difficult cluster-head selection and great energy consumption in Centralized Clustering-Task Scheduling for wireless sensor networks (WSNs), in this paper presents a Modified Centralized Cluster-Head Selection (MCCHS) algorithm based on Simple Energy-efficient Data Collecting (SEDC) protocol was proposed. The proposed system presents a MCCHS algorithm in static manner selection algorithm for cluster head selection technique using NS (Network Simulator) 2.34 Framework. This technique leads to improved CH strength, reduction in the amount of clusters in the network, and improving the energy efficiency.