Abstract—We propose an energy efficiency network selection method in coexistence with various wireless networks, such as 3G, WiFi and WiMAX. The network selection method considers the parameters of throughput (T), cost (C) and power consumption (P). First, a fuzzy measure for each parameter is determined. And the network is estimated for the evaluation value of each parameter using the fuzzy integrals. Finally, the most appropriate network can be selected, by comparing the assessment results of various wireless networks. Mobile terminal usage time can be extended, by considering the power consumption of the terminal for the selection of a network. And the proposed method can select the optimal network by considering throughput of each network.

Keyword—energy efficiency, wireless, network selection