

## **Markov process modeling for wireless sensor network availability with QOS constraints**

### **ABSTRACT**

The purpose of this paper is calculating the availability of wireless sensor network for a virtual grid by using Markov model. Since, wireless sensor networks are constraints by energy, their energy consumption should be limited within a way to guarantee their quality of service. In this paper, availability and quality of service in a wireless sensor network with particular coverage are investigated by using an energy optimized algorithm and Markov process.

**Keyword:** Availability; Energy efficiency; K-coverag; Markov process; Wireless sensor networks