

4. H. Al-Bahadili and Y. Jaradat, "Development and Performance Analysis of a Probabilistic Flooding in Noisy Mobile Ad Hoc Networks", Proceedings of the 1st International Conference on Digital Communications and Computer Applications (DCCA2007), 1306-1316, Jordan, 2007.

Abstract:

Broadcasting is a fundamental and effective data dissemination mechanism in mobile ad hoc networks (MANETs), which has several applications such as route discovery, address resolution, as well as many other network services. While data broadcasting has many advantages, it induces some difficulties known as broadcast storm problems, which are natural consequences of redundant retransmission, collision, and contention. Probabilistic flooding scheme has been widely used to resolve the broadcast storm problem in MANETs. Many research studies have been carried-out to develop and evaluate the performance of this mechanism in an error-free (noiseless) environment. In reality, wireless communication channels in MANETs are an error-prone and suffer from high packet-loss due to presence of noise, i.e., noisy environment. In this paper, we propose a simulation model that can be used to evaluate the performance of probabilistic broadcast for flooding in noisy environment.