

Abstract

Today, sharing radio resources is very important to reduce the cost of network infrastructure. Mobile companies can buy a certain capacity of the shared network depending on their budget and number of subscribers that they can handle. In this way, the subscribers of each operator connect to the same radio access network and can be differentiated through roaming based mechanisms. The analysis of voice traffic and video streaming for shared networks has been discussed in the literature. In this paper, an extended work has been done to study the effect of heavy data traffic like www and FTP on the shared network and how the radio resources with roaming based mechanism may be allocated to the sharing operators. One particular mechanism based on radio resource management (RRM) with preemptive priority queuing in admission control is discussed in details. The results show the effectiveness of the dynamically prioritization mechanism for allocating radio resources to the requested service. Also, it shows an outstanding performance for RT users compared with non preemptive scheme with little degradation for NRT users.