

Load balancing in mobile cellular networks is an important mechanism that enables distribution of demand across neighboring cells, which is critical for better resource utilization and user satisfaction. Current approaches for load balancing are reactive, redistributing users only when the offered load approaches the cell capacity. This approach can lead to deteriorated network performance and user experience. In order to better cater to users, mobile networks need to be proactive and provision resources based on expected demand. To this end we propose a load balancing mechanism that allows for proactive network configuration based on prediction of traffic load. Our approach makes use of power control mechanisms to reconfigure the coverage of a mobile base station and thus control the amount of users and offered load at that base station. We apply our method on a real-world cellular network in Senegal and show that it enables better distribution of load in Orange Telecom's network in Senegal.