Abstract

The ever increasing usage of power in operating the Base Transceiver Station has led to an increase in the Carbon Dioxide emission. The pollution emitted from these towers could
become a major reason of global warming in the future as the number of subscribers in telecommunication network increases. As an alternative, dynamic deployment of cell sizes is believed to reduce the power consumption at some base stations in a particular area for a given number of users. An growing concept of cell zooming has been used in this paper wherein a cell adaptively adjusts its size depending on the subscriber load. This paper presents a hierarchical fuzzy based cell zooming solution to reduce base station power consumption. Base station antenna height and its transmitted power are the results of our proposed fuzzy system.

References


**Index Terms**

Computer Science  
Communication System

**Keywords**

Power Consumption; Base Transceiver Station; Cell Zooming; Fuzzy Logic