

## عنوان مقاله:

Demand based Resource Allocation to Balance the Utilization and User Level Fairness in Femtocell Networks

## محل انتشار:

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## خلاصه مقاله:

Femtocells are widely used to improve poor indoor coverage and decrease the cellular networks high cost. The fact that femtocells and macrocells share similar frequency bands leads to a major challenge in time/frequency resources allocation. Addressing fairness among femtocells and improving time/frequency resources utilization are the main objectives of the previous studies. The balance between femtocell level fairness and utilization is considered in some of the previous studies. Providing user level fairness with respect to User Equipments (UEs) demands is the issue that has not received adequate attention so far. Here, a centralized resource allocation algorithm is proposed to improve the balance between user level fairness and radio resource utilization where the demand of UEs for radio resources are involved. In this algorithm, two independent phases are followed. The first phase assigns resources to femtocells in a greedy manner to increase the reused spectrum utilization based on the proposed priority. The second phase is planned in a manner to guarantee the fairness between UEs by considering their required resources whenever the residual resources are not proportional to the unmet requirements. Compared to the conventional methods, this proposed approach leads to an improvement in terms of utilization, fairness, and average amount of satisfied demands.

## کلمات کلیدی:

Femtocell, Resource Allocation, User Demand, Fairness, Utilization

## لینک ثابت مقاله در پایگاه سیویلیکا:

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