Abstract

Seamless handover is one of the main goals in Long Term Evolution (LTE). In order to achieve a seamless handover, the handover latency needs to be reduced. By predicting where the users are moving, the resource allocation can perform prior to the actual handover, thus can reduce delays in resource allocation and finally can reduce the handover latency. In LTE femtocells network, the large number of femtocells may deploy in a single macrocell, therefore the number of targets femtocell during the handover process is huge. Hence, the prediction of users’ direction is expected to reduce the scanning time and the handover latency during handover process. This paper performs the mobility prediction relying on Markov Chain. The results show the prediction of users’ direction after several movements. Based on the results, we can conclude that the main parameter that influence the prediction is a transition
probability matrix. Therefore, this value should be determined properly in order to get the most accurate prediction.

References


Index Terms

Computer Science

Wireless

Keywords

Long Term Evolution  Femtocells  Mobility Prediction  Markov Chain