Cooperative handover algorithm based on auxiliary carrier in LTE-Advanced relay system

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Abstract: Handover is one of the most important parts in mobility management. In the LTE-Advanced system, new technologies such as relay and carrier aggregation are introduced, which put forward higher requirements and challenges to the handover mechanism. By studying the handover process of the traditional LTE-Advanced system and LTE-Advanced Relay system, this paper proposes a cooperative handover algorithm with the consideration of the auxiliary carrier in LTE-Advanced relay system. This algorithm takes the advantages of wide spreading of low-frequency carrier, rich resources of high- frequency carrier, and in conjunction with relay technology and carrier aggregation technology. The propose algorithm reduces the handover outage probability and improve the throughput of the system.

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