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K-mean clustering for chunk formation based on channel response on OFDMA radio resource allocation systems (Article)

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Abstract

In this paper, we propose a novel method of the chunk formation using K-means clustering on the resource allocation for OFDMA (Orthogonal Frequency Division Multiple Access) system. The method has been used in the chunk formation process is based on the received signal level by utilizing the channel gain information. In this study, we use the basic feedback information of downlink channel response that is complex numbers received by the base station. The simulation results show that the process of chunk formation using the K-Means Clustering gives SSE (Sum Squared Error) smaller and the total SSB (between group sum of squares) higher than the chunk formation based on the received signal level. Based on simulation results also indicated that the application of the proposed method of chunk formation gives the average throughput system better when compared with conventional methods. © 2016 American Scientific Publishers. All rights reserved.

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