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Use of clustering concept for chunk forming based on constellation signals on OFDMA resource allocation systems   (Conference Paper)

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Abstract

In OFDMA (Orthogonal Frequency Division Multiple Access) wireless system, environmental conditions and mobility of all users make the conditions of propagation of each user on all subcarriers changed at different times. Required radio resource allocation scheme that works with accurate, has a fairly low complexity and it is able to adapt to changing conditions. This research is to answer these issues by developing a new resource allocation scheme that is adaptive to changes in the channel, with the classification of some subcarriers into one chunk is based on the analysis of the constellation signal received on each subcarrier. We propose grouping some subcarriers into one chunk by using clustering concept, the algorithm chosen for the simplicity of the computing process is a K-Mean Clustering. The simulation results indicate that the resource allocation scheme that we have proposed give SSE (Sum Squared Error) improvement and can improve throughput when compared to the conventional scheme which uses clustering on the received signal level. © 2015 IEEE.

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