

Novel link adaptation algorithm for multichannel wireless systems with datastream repetition

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Abstract

© 2015 IEEE. The paper derives a novel link adaptation algorithm of modulation and coding schemes (MCS) and parameters of multichannel transmission choosing. The developed algorithm is based on a special type of MCS switching table and a new performance metric of system payload and is intended for wireless data transmission systems with capability of datastream repetition through different simultaneously active wireless channels. The presented scheme provides the best choice of MCS and datastream repetition parameters in terms of wireless system resources minimization with respect to maximum transmission speed and fixed uPER level (unrecoverable packet error rate for repetitive datastream).

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Keywords

datastream repetition, multichannel, packet error rate, performance metric, resources optimization, system payload