

Smart channel-assignment algorithm for SDMA systems

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In order to exploit the potentialities of space-division multiple access in mobile cellular systems, the conventional radio resource management functions must be revised-especially the channel-assignment algorithms. In this paper, an algorithm designed to this purpose is presented and analyzed in reference scenarios and under various traffic load conditions, showing that a significant reduction of the intracell handover rate can be achieved. The proposed algorithm is not based solely on the current angular separation between mobiles, but also takes into account their potential future trajectory, predicted by means of the knowledge of the topography of the analyzed service area.

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