

ANALYSIS OF CALL HANDLING IN SINGLE CELL IN WIRELESS NETWORKS WITH IMPATIENT HANDOVER CALLS

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ABSTRACT. The mathematical model describing call handling in a single cell of wireless network is investigated. A method of approximate calculation of characteristics of handling processes of new and handover calls in such networks is presented. In a given model handover calls are impatient and are handled according to a radio channel reservation scheme of base station of a cell with a finite queue for handover calls. Relatively simple algorithms for determining loss probability of new and handover calls as well as average number of both types of calls and busy channels are developed. Results of numerical experiments are given, which demonstrate high accuracy of proposed formulae.

Key words: cellular networks, handover calls, quality of service, design algorithms.