THE PROBLEM OF MINIMIZING THE SUMMARY AREA
OF MOBILE INTERRUPTIONS AT A LINEAR PLACEMENT
OF GEOMETRIC OBJECTS

U. Tormosov, E. Stoyan, E. Yakushenko

The high computational complexity of the combinatorial optimization
methods, the difference of the combinatorial properties of the sets which form the
ranges of admissible solutions, are the reasons for the lack of unified approach to
combinatorial optimization problems solving. The basic idea of the combinatorial
methods consists in the transition from complete enumeration of finite set of
solutions to reduced one. The impossibility of exact solution of combinatorial
optimization problems of large dimension and specific limitations cause the
development of approximate methods, but these methods also have serious
disadvantages such as the obtained local extremum may not coincide with the global
one, it is impossible to estimate the difference between the local and global
extremum a priori. On this base, the development of optimization methods for
various classes of functions on combinatorial sets is the topical problem. The unified
approach to the study of geometric design problems on the base of the formalization
of the concept of geometric information and the introduced information space is
proposed in the research. In the research the main attention is given to the problem
of locating geometric objects, constructing of the mathematical model of this
problem. The solution of the optimization problem on the Boolean variables is
proposed with the help of the method which is based on the immersion of
combinatorial sets in an arithmetic Euclidean space. The statement of the practical
problem of geometrical design is presented.

Keywords: assignment problems, boolean variables, minimization.