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## Modeling and the Processes Analysis in Engineering Ecology

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Optimization of anthropogenous influences on a natural complex is integrated to the decision of the specific targets connected with preservation of the environment and rational use of natural resources. Thus statistical methods in geographical (natural) researches find the widest application. Quite often these methods serve as unique means of a quantitative estimation of various natural processes, the phenomena, and also displays of a climate, weather and anomalies. The mathematical description of such phenomena is probably only by statistical methods. The problem of an information network creation, is not independent on sense, and represents a part or the initial stage of the decision more the general task in modeling and optimization of chemical and technological processes more often. Therefore, starting the organization of gathering of the information, it is necessary to mean specificity, ultimate goals and the cumulative formulation of a concrete solved problem of chemical technology [1-3]. Among problems in the field of ecological computerized course wares creation is the difficulty of determining the optimal sequence of presenting educational topics of a discipline, because known pedagogical methods very seldom have their realization in program.

After fulfilling simple enough replacement procedure of elements of Galois fields by natural values of the chosen factors the orthogonal table turns to an information network, and after performance of measurements of an analyzed parameter according to conditions every line is received table set function which allows to receive the mathematical description of the allocated zones of territory pollution. For choosing the best information network from set of admissible, in the program quantity of experiments in an information network for each of ten factors is determined, each of which varies at ten levels for models of the main effects and models with pair products. By the same quantity of experiments it is possible to describe different number of factors at one level of a variation, or identical number of factors at different variation levels. In case of rigidly set number of factors have to choose such parameters of an information network which for the set number of factors have the maximal value of a variation levels number.

The method of construction of information networks is developed, and before any of known classical methods of planning of experiments was not capable to ensure, for example, six-factorial model of the fourth order only by twenty five experiments. In it is the uniqueness of the information networks construction method with the decision of a packing problem of orthogonal tables by multiplication and addition of Galois fields elements in deductions classes on module ring according to coordinates of top gathered planes on infinity. On the basis of described methods the software of information networks construction with the decision of a packing problem of orthogonal tables by multiplication and addition of elements of Galois fields in a ring of deductions classes on module according to coordinates of top gathered planes on infinity is developed.

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