**THE PRACTICAL STUDY OF THE BEHAVIOR OF THE COMPLEX DYNAMIC SYSTEMS ON THE BASIS OF THE LIFE GAME FOR EDUCATION IN ECONOMICS, COMMERCE, AND LAW.**

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Keywords: dynamic systems, cellular automata, education, game training, economics, commerce, law

The practical study "LIFE GAME" for the professional education in economics, commerce, and law is elaborated to help students to get acquainted with the basic principles of the behavior of the complex dynamic system such as the economic or social community and biological self-reproducing system. The two-dimensional cellular automata widely known as J. Conway's "Life game" is used as a model of such a system [1]. This model allows to simulate numerically the behavior of the "cell community" on the 2D square lattice.

Several typical "scenarios" are the subject of study: stationary state, stationary cycles, chaotic behavior, self-reproduction and self-organization. These scenarios reflect common principles of the behavior of the complex dynamic systems. The students offered to model the evolution of several standard configuration of "cell community". The rules of the cell reproduction algorithm could be changed also to model different types of the "cell species" - environment relations.

The practical study consists of three parts. The first is to gain the theoretical background in understanding the basic principles of the complex system behavior, the cellular automata model of such a systems and, in particular, the algorithm of . Conway's "Life game". The second is devoted to studying the evolution of several standard configurations of the "cell community". The third consist of several practical tasks to model more complex configurations.

Thus, the practical study "LIFE GAME" allows the participant to gain the practical skills in dealing with the complex systems and to study the basic principles of their behavior. This gives the experience for the future practice in economics, commerce, and law.

This work was supported by Russian National Human Genome Project, Russian Ministry of Science and Technical Politics, Siberian Branch of the Russian Academy of Sciences (grant No. IGSBRAS-97N13), and Russian Foundation for Basic Research (grants Nos. 96-04-50006, 97-07-90309, 97-04-49740, and 98-07-90126).

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