PROCESS MODELLING OF THE CITIZENS' E-APPEALS HANDLING SYSTEM USING GPSS TOOLS ON THE BASE OF COMPETITIVE INTELLIGENCE.

O.V. Markovets, I.I. Oliynyk
Social Communications and Information Activity Department, Lviv Polytechnic National University,
S. Bandery Str., 12, Lviv, 79013, UKRAINE.

The behavior reproduction of the system which handles citizens' e-appeals considering the results of basic relationships between its elements for providing different experiments is the main goal of the paper. Other purposes are to analyze quantitative indicators of the investigated system's work and to make management decisions for improvement the effectiveness of its functioning.

Effectuation of the main goal requires carrying out these tasks:

- Functioning effectiveness analysis of the system which handles citizens' e-appeals;
- Structural and functional modeling of the system;
- Making a conceptual model of the system;
- Building a scheme which shows the functioning of real processes of receipt and processing the appeals;
- Making a mathematical description of the system which handles citizens' e-appeals;
- Making an simulation model description;
- Programming of the model;
- Obtaining quantitative indicators of the system's work and making the check of model's adequacy;
- Checking the quality of system's work;
- Making management decisions towards further work planning of the system which handles citizens' e-appeals.

One of the most effective ways of management decision preparation under conditions of uncertainty and high dynamism of environment parameters is using the computer modeling. It helps to simplify and accelerate the system parameters identification, to accelerate and automate the process of system creation in accordance with set deadlines and parameters, to improve quality and to reduce the cost of the system. This approach allows setting quantitative indicators among main parameters of the system, to calculate possible consequences of made decisions in terms of operative and strategic purposes of system's owner.

Using the services which allow sending of e-appeals to local governments aims to improve effective interaction between governments and public, effective realization of state politics and government in the field of proceeding the citizens' appeals to executive agencies. Successful implementation of the services which allow sending of e-appeals and proper resource allocation in the system allows making faster and radically bettering the processes of citizens serving. That is the reason for making functional analysis of this system which aims to identify potential problems related to resources overloading on the early stages of system's work and making appropriate effective decisions.

Keywords – computer simulation, GPSS, e-claim, queuing system