

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
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ТА СОЦІАЛЬНИХ КОМУНІКАЦІЙ**



СОЦІАЛЬНО-ГУМАНІТАРНІ АСПЕКТИ РОЗВИТКУ СУЧАСНОГО СУСПІЛЬСТВА

**МАТЕРІАЛИ ВСЕУКРАЇНСЬКОЇ НАУКОВОЇ КОНФЕРЕНЦІЇ ВИКЛАДАЧІВ,
АСПІРАНТІВ, СПІВРОБІТНИКІВ ТА СТУДЕНТІВ**

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investments and have large economic effect on countries and enterprises development.

Merger activity in the Ukrainian market is growing too. Every year more and more Ukrainian companies get involved in the M&A processes. Only in 2002, according to the Antimonopoly Committee of Ukraine, 400 enterprises got approval to conduct economic concentration in various forms, including M&A. Foreign companies actively invest in buying Ukrainian firms and Ukrainian enterprises search for the opportunity to penetrate through cross-border mergers and acquisitions into the foreign market. They do not have enough experience and expertise in the field and practical knowledge related to M&A. The world accumulated practice might be extremely useful to them.

1. Sterman, John. Business dynamics : systems thinking and modeling for a complex world / John D. Sterman, 1992, 1008 P.
2. Project Management Institute. 2000. A Guide to the Project Management Body of Knowledge (PMBOK ® Guide). Project Management Institute: PA.

THE BASICS OF THE INTELLIGENT SYSTEM TO PREDICT THE DEGRADATION OF THE VIRTUAL MACHINES IN THE CLOUD ENVIRONMENT

S. V. Pimonenko – *postgraduate*
(*Sumy State University*),
V.S. Kurochkina – *EL Advisor*
(*Sumy State University*)

In the modern informational society the different types of the intellectual systems take a leading position in the world. Their development can be characterized as the snowball development. A lot of scientists are studying this problem. However, some aspects of the quality of the information-extreme intellectual technologies require the further research.

In such direction, the authors analyzed the degradation of the virtual machines owing to their interference with the common physical infrastructure. As a result, the authors proposed the approaches to format the input of the mathematical description. This method is based on the cluster-analysis of the performance and resource usage rates of the virtual machines. In addition, the physical modeling of the proposed algorithms is

implemented through the Google cloud services. Besides, the authors stated that if the clouds' providers use the virtualization technologies, then the machines will be able to share the physical resources among multiple virtual machines belonging to different users. Concomitant use of resources contributes to the efficiency of the cloud-based IT infrastructure and reduces maintenance costs. This provision cloud services will be able to implement according to one of the business models – pay as consumption (Pay as you go) subscription or reserved resources (Reservation Pool). Thus, the system management cloud should provide the quality of service cloud customers and maximizing the use of resources put into operation.

It's necessary to underline, that the practical value of the cloud computing results in the creation of the instruments to prevent from performance degradation in the virtual machine optimization of the energy consumption and the proper service maintenance for cloud services' users. Thus, the results of the physical simulation proved the effectiveness of this approach. Moreover, this approach gives opportunity to receive the training matrix for decision rules.

GAME THEORY

K. Novak, *group F-41*
(*Sumy State University*),

O. R. Gladchenko, *EL Adviser*
(*Sumy State University*)

Game theory is a section of applied mathematics that studies various mathematical models of optimal decision making in conflict situations. J. Von Neumann and O. Monhenshternom in 1944 wrote the work "Theory of Games and Economic Behavior." From the very beginning of its development, it was aimed at solving economic problems. Later it began to be applied in other areas related to the conflict. Theoretical and playing methods of optimal solutions are widely used in medicine, in economic and social planning and forecasting, and other matters of science and technology. Today, the game theory is widely used in various sciences such as economic, political, computer, social, etc. Game theory attempts to identify strategic behavior in different situations mathematically in which success is the subject of the decision-making and depends on the moves of other players.

Game theory is also used in economics and management. Mathematical models of this theory became the basis for the creation of