

INFORMATIZATION PROBLEMS – ISSUES OF INNOVATION
DEVELOPMENT

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According to the definition given in free encyclopaedia “Wikipedia”, “innovative type of development is characterised by shift of emphasis on use of principally new progressive technologies, by switch to production of high-technology products, by progressive organisational and administrative decisions in innovative activity that is related to as micro-, so macroeconomic processes of development – establishment of technology parks, technopolises, implementation of policy of efficient use of resources, intellectualization of the whole production activity, softization and servization of economy. Objective changes in social economic development led to new model of economy development; new features and priorities are distinctive for it. Important role in society’s life began to play fields, which are based on so called “high technologies”, and also fields, which actually satisfy the needs of people” [1].

After signing agreement about the partnership and cooperation between Ukraine and European Union and its member-countries on the 14th of June, 1994, and its ratification by the Verkhovna Rada of Ukraine on the 10th of November, 1994, and after agreement came into effect and also was approved by Decree of President of Ukraine of June 11, 1998, № 615/58 Strategy of integration of Ukraine into European

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Union became “By way of European integration on 2004-2015”; Ukraine have chosen direction on innovative model of economy’s development.

Real situation with innovative model of development of national economy is well known, even by non-specialists.

Formation and providing framework for development of national innovative system as separated item of state policy, strategic aims of development, main methods and functioning of national innovative system are not provided appropriately by legal framework of Ukraine. Opponents can respond to this statement by counterargument: wide legal framework is established in Ukraine – laws of Ukraine “On free economic zone “Yavoriv”, “On special innovative regime of technological parks’ activity”, “On top-priority directions of development of science and technique”, “On countrywide complex program of development of high technologies”, “On scientific park “Kyiv politechnika”, “On scientific and scientific-technical activity”, “On state regulation of activity in the field of technology transfer”, “On top-priority directions of innovative activity in Ukraine”, “On special regime of innovative activity of technological parks”, “On innovative activity”. It is only half-truth.

It is clearly defined in project “Strategies of innovative development of Ukraine on 2010-2020 under conditions of globalisation challenges” [2], which was created as execution of Decree of the Verkhovna Rada of Ukraine of February 17, 2009, № 965-VI “On holding of Parliament hearings “Strategy of innovative development of Ukraine on 2010-2020 under conditions of globalisation challenges” by Committee of the Verkhovna Rada of Ukraine on questions on science and education, by G.M.Dobrov Centre for scientific and technological potential and science history studies of National Academy of sciences of Ukraine, and also by central and local agencies of State power taking into account key aspects, which are

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contained in the project of Strategy of innovative development of Ukraine on 2009-2018 and on the period up to 2039, prepared by State Agency for Investment and National Projects of Ukraine and Organization “Institute for Economics and Forecasting, Ukrainian National Academy of Sciences”, and in range of other strategic projects, which up to now are not evaluated, that “sufficient serious legal framework, which not only provides general commitment to innovative development of economy, but also describes main mechanisms of implementation of such state direction of development, by these documents (above mentioned laws of Ukraine – by author) and numerous executive orders of Ukraine. But real effect of these mechanisms in Ukraine did not started

Besides the Verkhovna Rada of Ukraine unfortunately did not show sequence: after approval of directly applicable norm statutorily, it easily agreed with suggestion to suspend certain articles of laws, in the first instance temporary, and then to remove them entirely. In such a manner Law “On scientific and scientific-technical activity” was amended more than half-way – really only articles related to retirement insurance of scientists are in effect.

More dramatic situation is with Law of Ukraine “On innovative activity”. After remove from it of articles 21 and 22 it almost lost its sense and turned into just declaratory instrument, in which certain terminology is determined and widespread in the world mechanisms of state influence on innovative processes are described, but none of these mechanisms are really not established. Possibly attempt to organize support and stimulation of all without distinction innovative projects, is behind the first statutory wording, and was a little bit ahead of time. That is why we suggest to narrow its action down towards support of priorities. But without this, law carries out only function of textbook for students.

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Unfortunately, into such washed up imitation of real act turned determination of high-priority directions of scientific and technical as well as innovative activity and formation and realisation of state scientific and technical programmes (mechanism of formation of innovative programmes is not provided by our legislation). The idea of formation on a competitive basis of state scientific and technical programmes directed to realisation of high-priority direction of development of science and technique in Ukraine was discredited by the fact that on its execution small part of funds from general financing of science was devoted by Ministry of Finance of Ukraine. This means that they don't respond to the idea of "high-priority".

Essential blames were induced by procedure of determination of high-priority directions of development of science and technique and thematic scope of programmes. Mechanism of formation and realisation of state scientific and technical programmes, in spite of the fact that progressive competitive approach to project choice was realized in them for the first time, practically made a departure from demands of program and intended approach, therefore did not give an opportunity to take advantage of such approach. ”

Then in mentioned strategy it is shown that “Attention was given to principal drawbacks in realisation of legislation, which provides relations in scientific and technical as well as innovative spheres, during Parliament hearings “Intellectual property rights’ protection in Ukraine: problems of legislative providing framework and use of legislation” (March, 2007) and “National innovative system of Ukraine: problems of formation and realisation” (June, 2007). Considerable attention was given to these questions also during hearing of Committee of Verkhovna Rada of Ukraine questions on science and education: “Innovative activity in Ukraine: problems and ways of their decision” (November, 2006) and “Efficiency of use of

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Ukrainian legislation in the field of copyright and associated rights” (September, 2008). But essential changes have not taken place.

Therefore today legal base in effect related to scientific and technical as well as innovative development, in spite of significant efforts, spent on its development, does not meet modern requirements and practically does not influence on temps of such development. Such questions are not solved: stimulation of innovative development and expenses on scientific researches and work-out, formation of innovative venture capital funds, realisation of politics of innovative priorities of state, use for this purpose of opportunities and advantages of program and intended approach”.

It should be noted that mentioned Strategy not only observe and criticize modern condition of innovative development of country, but also suggest specified actions on elimination and prevention of repeat in the following of the past and future errors. For example it is suggested in the Strategy: “To determine legally main direction of innovative politics of the country of finding a way out of the crisis and providing framework for good living standard. They can be formed in the following way:

- establishment of economy and society, which is based on scientific knowledge, implementation of state, legally provided policy of assistance to innovative activity, creation of kindly investment climate;
- development of innovative infrastructure, able to realize efficiently and flexibly necessary in the moment innovations, based on high industrial technologies;
- development of communication infrastructure – information and technological network, which give an opportunity to orientate in modern technological space and to engage in investors for the purpose of financing of projects inside the country;
- stimulation of processes of education and personnel development;

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- stimulation of strategy of our legislation with the purpose of development of system of economic motivations (tax, credit. insurance) on creation and commercialization of items of intellectual property right with the purpose of formation of market of these items” [2].

We should stop on task “development of communication infrastructure – information and technological networks, which give an opportunity to orientate in modern technological space and to engage in investors for the purpose of financing of projects inside the country”.

Today generally accepted main field, which directly satisfy information requirements of people, is industry of creation, improvement and implementation of information and communication technologies.

It is not by accident such terms as “information society”, “electronic management”, “information services”, “electronic document flow”, “digital signature”, “electronic payments”, “electronic means”, etc. obtain currency and become common.

Ukraine in 1998 the first of post-Soviet countries passed national laws “On Concept of national program of informatization” and “On national program of informatization”.

This is not extraordinarily because Ukraine even in Soviet period was famous for its school of programming.

On the 7th of May, 2000, Cabinet of Ministers of Ukraine by its Decree № 777 established Government Commission on questions on information and analytical providing of executive authorities (hereafter referred to as Government Commission) with the purpose of coordination of carrying out of works on reforming of system of information and analytical providing framework for activity of executive authorities and work out of recommendations on setting of standards, norms and rules, related to

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use of program and technical means of informatization, unified classifiers of information, information registers and resources, providing framework for information state security, improvement of state system of standardization and certification, etc.

Understanding international trends of development of society, bearing on work experience of State Commission on questions on prevention and control of possible damages of computer crisis 2000 (Decree of Cabinet of Ministers of Ukraine of February 16, 1999, № 218) and understanding that basis of ICT and questions on providing framework for national security in this sphere is operational system, Government Commission during its proceedings on the 29th of September, 2000, (report of proceedings № 6) considered a question “On work out of native operating system (OS)” and with the participation and support of National Academy of Science of Ukraine (Cybernetic Centre) and specialists-practitioners in the field of information technologies, made such decision “To support initiative of Department of special telecommunication and technical information security of Security Service of Ukraine, International scientific and educational centre of information technologies and systems of National Academy of Science of Ukraine and Limited Liability Company “Теоc-Інформ” on creation of native secured operating system on the basis of OS Linux.

To consider appropriate assigning to this work of status of state scientific and technical program”.

This decision was based on the fact that National program of informatization, which has by its aim creation of information society as consequence of entry of it into global information space, was passed in Ukraine. In process of informatization of Ukraine there are certain problems and difficulties, but informatization continues its development. Fundamental progress in creation of corporation networks, computer

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workstations, etc. was achieved in separate fields. In Ukraine initial platform for the purpose of informatization development is created. Its conceptual difference is establishment of information infrastructure, which consist of traditional elements (telecommunication and computer networks, data bases, knowledge bases) as well as networks of interrelated information and analytical centres of different levels and assignment. This approach provides, on one side, whole new level of information service, on other side, wide use of modern system and analytical methods and means of solving of global and strategic tasks of society management, its parts and structures.

For realisation of conceptual idea of informatization of Ukraine accompanying measures are accepted by President and Government of Ukraine. For example, range of decrees of President and resolutions of Government, which provide certain measures on acceleration of processes of informatization in Ukraine are passed, taking into account Resolution of Government "On graphic computer", which provide creation of whole new information technologies, without which impossible to provide information access to information in advanced information society [3].

Processes of informatization in worldwide practise are developed on the basis of high-efficiency instrumental measures, central place among which belongs to operating systems, so called operators of information technology system. Operating system, which is core of network software, determines how effective will be used existing technique and information resources. Today Ukraine has no operating system, which can satisfy modern requirements on productivity, reliability, security and compatibility.

Theoretically it is possible to create in Ukraine native operating system, starting from point zero. Practically it is unreal. Creation of reliable high-efficiency operating system needs serious financial and human resources and will take few

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years. Estimated total of leading computer companies, taking into account their developments and scientific and technical potential, for the creation of new competitive OS it is needed to expend approximately 1 billion of dollars.

There are two possible approaches of creation of modern high-efficiency instrumental measures. One of them lies in purchase of complex of instrumental measures under licenses in countries, which have similar program products. This approach in the context of realisation is simpler. But economically it is connected to big expenses. For example, cost of standard hardware only for one workstation powered by Windows NT on the average is approximately 600\$. Ukraine-wide expenses on purchasing of such license product are several billions of dollars.

There is also another, more effective way. In world-wide society core Linux, which has such configuration and functional opportunities, which allow to countries on this basis work-out their own operating systems, which satisfy necessary requirements of information security and reliability. Also it is important that this core transferred free of charge with open code.

Today Linux is accepted as national operating system of China, is implemented into military technical complex of Russia. It is used in the Pentagon and NASA. Opportunity of its use in such countries as France and Norway is considered. It is already implemented in Bundeswehr.

Such companies as IBM, Compaq, Hewlett Packard, Dell distribute their personal computer with installed Linux on them.

That is why it is reasonable for Ukraine to follow this way. This conclusion is a result of complete analysis that was conducted by International scientific and educational centre, company "Геос-інформ" and Department of special telecommunication and technical information security of Security Service of Ukraine.

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As shown in analysis this way will provide serious economic effect in comparison with other opportunities.

On the initiative basis as from January complex of works on development of start-up complex of national operating system was carried out. In the process collective, which is able to do this work, was formed. Core of national operating system can be developed during the year with financial support in size of 6-7 millions of hryvnia. As a result operating system, which will allow realizing of informatization projects in different fields, taking into account carrying out complex of measures of security and statehood, will be created.

This decision is rather spectacular example of innovative development of determined field of economy.

But in real life above mentioned thing took place.

It is necessary to note that Russia, China, France, India and other countries followed this way, but Ukraine has to expend a lot on purchasing license OS of mainstream use or to stay at the head of the table in black list of countries, which use pirated software. And this is despite the fact that in Ukraine IT-industry is developed and has rather high world ratings, but in general by means of outsourcing.

At the end, in support of analysis and conclusions, provided in “Strategy of innovative development of Ukraine on 2010-2020 under conditions of globalisation challenges”, we consider that main reasons of modern condition of innovative development of Ukraine also are:

- fragmentarity, non-complexity of decision-making, even within one field of economy;
- lack of succession in realisation of made decisions during political as well as organisational and administrative changes at all levels of state regulation.

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While personal and corporate interests will be dominated by all-social, state interests, then improvement in the field of development should not be expected.

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ПИТАННЯ ІНФОРМАТИЗАЦІЇ – ПИТАННЯ ІННОВАЦІЙНОГО РОЗВИТКУ

Фурашев В. М.

Статтю присвячено проблемам одного з головних напрямів інноваційного розвитку України в сучасних умовах – інформатизації. У публікації визначено ключову ланку процесу

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інформатизації як основи побудови інформаційного суспільства, що безпосередньо впливає на рівень забезпечення національної безпеки країни, інформаційної безпеки людини, суспільства та держави в цілому.

Ключові слова: інформатизація, інноваційна діяльність, інформаційне суспільство, інформаційно-комунікативні технології, аутсорсинг.

ВОРОСЫ ИНФОРМАТИЗАЦИИ – ВОПРОСЫ ИННОВАЦИОННОГО РАЗВИТИЯ

Фурашев В. Н.

Статья посвящена проблемам одного из основных направлений инновационного развития Украины в современных условиях – информатизации. В публикации определено ключевое звено процесса информатизации как основы построения информационного общества, которое непосредственно влияет на уровень обеспечения национальной безопасности страны, информационную безопасность человека, общества и государства в целом.

Ключевые слова: информатизация, инновационная деятельность, информационное общество, информационно-коммуникативные технологии, аутсорсинг.

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The article is focused on problems of one of the major directions of innovative development of Ukraine under current conditions – of informatization. The article defines key element of the informatization process as the basis of building the information society, which directly affects the level of maintenance of national security, informational security of individuals, society and the state in general. The author has provided a general analysis of the legal framework of scientific, technological and innovative development, concluded that the regulations in these fields are mostly declarative. Analysed the provisions of "Strategy on Innovative Development of Ukraine for 2010-2020 in response to globalization challenges." Noticed that the communicative infrastructure has to develop into the modern technological space. Grounded conceptual idea of informatization of Ukraine by creating highly instrumental measures, such as information systems. Defined and substantiated two approaches of its creating, one of them is licensing complex procurement of

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integrated tool set in countries that have similar software products (this approach is simpler); and the second one is to develop a national operating system based on already world-known operating systems, such as Linux (this approach is pricier). As a conclusion the author defined the main reasons of the current conditions of innovation development of Ukraine, among them: (a) the fragmentary, incomplete solution of current problems; (b) the lack of continuity in the implementation of decisions taken at the political, organizational and administrative changes in all levels of government.

Keywords: informatization, innovation activity, informational society, information and communication technologies, outsourcing.