

Information and Communication Technologies

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Modern information and communicative technologies considerably changed the environment, speeded up globalization and dissemination of information. The IT (information technologies) change not only manner of production, but also holidays, methods and forms of upbringing and education. They affect the social structure of society, economy, politics and development of social institutions.

During the years of independence Ukraine made quick steps in the sphere of information technologies. Within time information has become Ukrainian national resource which reflects the place of the country in the world system of economic and political relations.

The necessity of telecommunication development and the tasks for Ukraine to occupy an adequate place in the world information space stimulated and motivated the Government of Ukraine to found in 2001 an Institute of Telecommunication and Global Information Space under the aegis of the National Academy of Science. The purpose of its foundation was to lay down conditions and provide support of development of fundamental and applied academic researches in the sphere of telecommunication and global information space.

The issue of effective use of Internet is one of the priorities in the state policy in the sphere of informatization. Ukrainian segment of Internet was informally launched in 1990, but the domain UA was officially registered in December of 1992. Results of the studies indicate that every 6 months the amount of hosts increases in 1, 47 times.

Formation of information society in Ukraine is one of the most vital issues nowadays. First of all it concerns the issues such as “information society”, “protection of personal information” that are included into the program of integration of Ukraine into the European Union.

It is important to mention that Ukraine has huge potential and possibilities for the development of information infrastructure. That’s why the government recommends all social groups and local administrations take the below given issues into consideration:

- Prepare Ukrainian people to new reality connected with dissemination of information technologies. So, ukrainins are recommended to support civil, central and local initiatives in order to make them more effective and useful;
- Provide financial support of the National program of informatization;
- Develop a state program of the development of information society in Ukraine taking into consideration necessity of information security.

Informatization of financial and fiscal systems and state financial-economic control are major priorities of state policy. Ministry of Finances of Ukraine operates an automatic multilevel system of financial transactions. The State tax administration uses a number of centralized information systems for the adequate control of the database of tax payers, both for corporations and people.

The national infrastructure of information system is being formed. So most of attention is paid to the fulfilling of the following tasks:

- Develop the concept and the program of the national telecommunication infrastructure;
- Develop the concept and the program of information resources of state power bodies and the formation of automatic system of state land registration and the state bank of digital information of the territory of Ukraine with geoinformation technologies.

State policy of informatization presupposes few goals, such as rational use of industrial and technical potential, technical and financial resources that can be used for the formation of modern information infrastructure. They contribute to solving an amount of current and perspective tasks important for the country development, providing systemic and complex development of informatization.

According to the decree issued by the President of Ukraine, Internet in the country got an impulse for the development. Favourable conditions promote wide spread of Internet in educational institutions. They are helpful for state bodies, scholars, business people and voluntary organizations that are interested in improving and increasing effectiveness of Internet use.

The national program of informatization is being implemented. Budget finances are used predominantly for support of national priorities, such as informatization of social sphere, science, education, culture, and the formation of the national system of analytical activity of state power bodies and the bodies of local administration, lawmaking, normmaking etc. [1].

According to the report, published by the World Unity of Electric Communication under the aegis of the UNO, Ukraine occupies the 67th place among the countries which develop information technologies. At the same time the index of information technologies increased up to 4,4 in comparison with previous year, when it was not higher than 4,2. Lebanon occupies the 65th place, Panama is the 68th and Turkey is on the 69th. The five leading countries in the list are as follows: Southern Korea, Sweden, Denmark, Iceland and Finland. Russia is on the 38th place, Poland is on the 31st and Byelorussia is on the 46th. The UNO monitors the IT development in the world. The rate includes 155 countries, ranged by the access to Internet, spread of telecommunication technologies and users' skills [2].

Development of telecommunication technologies is closely connected with the level of income in the economy. Index of IT development in the countries with GDP above 20 thousand dollars per capita is in average in two times higher than in the countries with lower level of income. Reduced income negatively affects the quality of IT application and telecommunication services more than spreading of technologies.

In July of 2012 the President of Ukraine Viktor Yanukovych ordered profile ministries and departments to prepare a project of the Strategy of Development of information society in Ukraine, in particular a project of the plan of measures for formation and functioning of systems of electronic governing. The project is expected to have tasks fulfilled due to the plan of action for the 2012 along with the Program of economic reforms for the period of 2010-2014.

The plan of measures includes functional integration of information resources of state bodies, development and functioning of the only information-analytical

system of social security for people, electronic registration of patients in pilot regions, the only information web-portal of citizen applications in state bodies and local administrations, the only state web-portal of administration services and the automatic system “The only window for submitting of electronic accounts”.

In April of 2012 the National commission of regulations in the sphere of communication and informatization initiated formation of the only information-communication platform of state power bodies. By the words of the chair of the National commission of regulations in the sphere of communication and informatization Petro Yatzuk, the further development of informatization and transformation in Ukraine is impossible without effective cooperation on the level of information systems.

In February of 2012 Prime-minister of Ukraine Mykola Azarov mentioned, that in the sphere of IT Ukraine should develop quickly and cooperate with businesses.

Later on Vice-prime-minister of Ukraine Sergiy Tigipko said that IT sphere is the most perspective in Ukrainian economy and can accompany development of other spheres. In 2011 IT market was assessed in one million dollars. It has a huge potential that can be used due to the favourable conditions of IT companies. Mr. Tigipko also called upon passing a bill about the privileged tax regime for the IT sphere. This point of view is justified because there are about 14,1 million users of mobile Internet in Ukraine (by the 30th of June of 2012) [3].

Information technologies are widely used by Ukrainians. And the data reported at the International Scientific Congress “Information Society in Ukraine”, conducted in Kiev during the 25-26th of October 2012 proved the idea. The newest projects of information technologies, developed to make work of state bodies, business and educational institutions easier, were introduced there. Electronic services make work of the Government and local power more transparent. Volodymyr Semynozhenko, the Chair of the State Agency of Science, Innovation and Information, at the opening of the Congress mentioned that state and private partnership in the sphere of information-communication technologies contribute to effective development of business and civil society.

Digital technologies are also used in the sphere of education. These are automatic systems of school and institution management that help to register documents and manage different spheres of activity in educational institutions by means of computers [4].

Ihor Myhailenko, director of press-service of the Research Institute “Applied Innovation Technologies”, in his report at the Congress mentioned that the students’ cards serve as models for the future social card for Ukrainians. But its functioning requires formation of the only information space, which will unite activities of many departments. Similar document – the so-called “Kievite card” is being functioning in the capital of Ukraine.

Other projects represented at the Congress are ambitious. For instance, Bionic Hill Company offers formation of a new place in Ukraine which would unite business, science etc. This place will give favourable conditions of life, work and leisure for people in the green zone of Kiev. According to the project it is going to

be a territory with offices, research centres, and living accommodations – a kind of club for the people united by the sphere of IT, biotechnologies and clean energy. There are analogical centres in the world, for example, Technopolis in Finland, Bangalore in India etc.

Last surveys indicate that ever second Ukrainian constantly uses Internet. In comparison five years ago only every fourth used it. Experts consider this increase as a reflection of the world tendency, so Internet using stimulates social and business activity of people. Almost 20 million young people above 15 (about 43,5 % of the whole population) regularly use the Net. They do it partly via mobile phones and partly via desktop computers. This data was reported by “In Mind Factum group”, which assessed the situation at the end of 2012. Similar information was reported by the National Commission of the regulation in the sphere of communication and informatization (by LigaBusinessForum report).

Survey, conducted by Iks-Consulting, indicates that 14, 1 mln. people use mobile phones in Ukraine. Half of the Internet users come from cities and every fifth is from the countryside. Every third user is a kievite and every fifth is an odessite. Transcarpathian, Sevastopol and the North of Ukraine are among the outsiders, because most of the people living there do not use Internet.

The amount of Internet users increase and it makes clear that Ukraine goes the same road as the rest of the world. It was mentioned by the Internet-expert and the manager of the company “Publicity Ukraine” Dmytro Vasilyev in his interview given to Radio “Svoboda”.

The process of virtual world formation goes on. More and more Ukrainians realize that Internet can be an instrument of leisure organization, money making and creativity realization. Nowadays 44 % of the population understands that Internet is convenient, because of its social nets, skype, Internet-banking etc. People also realize that it is safe. So Ukrainians use it the same way as the developed countries. The difference is in percentage.

During “The Tax Maidan” in Ukraine participants of mass meetings against the power used Internet to monitor situations in other regions of the country and coordinate their efforts. Thanks to Internet multithousand meetings could be organized and held in Dnipropetrovsk and other cities for “The day of Anger” in 2011.

People, who use the Net, get new information about the situation in Ukraine and get politically more mature. Experts are convinced that Facebook and Twitter users are more interested in politics and social life of the country. Political topics are more discussed in other social nets. This tendency is formed under the influence of Internet. Experts think that within time it will considerably increase.

Modern society that uses computer technologies in its life and activity personifies deep social revolution. Modern IT led to formation principally new models of social integration, communication, social and political activity, style of life, education etc. Deep changes are connected with new media that function in *Web 2.0* and it leads to vital changes in structures of information utilization by the people and to formation of multimillion global “set communities” [5: 3].

It is important for Ukraine to apply information technologies because they increase quality of preparation and decision making of executive power. Information society formation goes back to 2000. In 2007 a new law “About the basics of information society development in Ukraine for the period of 2007-2015” was adopted [6 : 82].

National policy of IT society is based on the principles of: science and innovation priority in state development; legislative and economic favourable conditions; allround development of information infrastructure; availability of information resources and access to telecommunication services; assisting of growth and amount of electronic services; improving skills of personnel; stimulation of motivation to IT using; wide application of IT in science, education, culture, health protection, environmental protection; information security guarantee [7:107].

In order to stay competitive at the progressive evolutionary market it is necessary to use all preferences of modern technologies. Optimistic prognoses were made by the participants of the Second AllUkrainian Forum of Internet Management (Kyiv, September 2011). From their point of view IT market in Ukraine is on the threshold of revolutionary jumping which will mark its extensive development.

Statistics says that from 6 up to 17 million Ukrainians use Internet. Quality of the traffic improves annually. It is foreseen that by 2015 the speed of the traffic will have been increased in 48 times. Nowadays by the estimation of the company *Pando Networks*, Ukraine is ranged as one of the first ten countries with highest speed of Internet traffic (1190 kb/second; the average speed is 580 kb/sec.) [8].

Important steps on the way of informatization of Ukrainian society were made by implementation of the infomatization program in the secondary school. A set of laws were adopted by Supreme Council of Ukraine. For instance: “About telecommunication”, “About the activity in the sphere of informatization”, “About the concept of information policy” and “About electronic digital signature”.

Changes are seen in economy as well. By analogy a system of express payments is being developed. It allows paying bills (rent, telephone communication, central heating etc.). At the same time new questions arise. Among them are privacy issues and safeguarding of personal information due to low security level of Ukrainians who use Internet (they suffer from hackers).

Changes are observed in the sphere of railroad services. The new service of booking railway tickets via Internet is convenient. Every year more and more people use it. This service became available from the 17th of May 2012. Pasengers can use the service electronically through the official site of Ukrzaliznytsya. In on-line regime you can select a route, find out about the availability of seats, date and payment for the ticket. This new system has a comfortable interface for the route formation and it allows passengers to pay via Internet, using all valid instruments of personal clearing: VISA, MasterCard, Webmoney etc. [9].

Tax system also undergoes changes. The procedure of getting tax certificate will become completely electronic. New service is being tested. The director of the Tax Department Oleksandr Klymenko mentions: “We are testing the system and

the procedure of submitting tax declaration and sending the certificate back. This event not only speeds the procedure up, but also neutralizes human factor and therefore minimizes the risks of any corruption schemes". Tax-payer will have to browse the Internet and there is no need to attend the local tax office. This service will economize time and money of people [10].

Developed program accelerates the process of giving tax payers a certificate about the lack of tax debts in electronic format on the basis of electronic application, submitted by a tax-payer. This certificate will be made automatically and sent via Internet to e-mail of payers. Tax-payer, who got the electronic certificate, can apply to the centre of tax-payers' service in order to get it in paper. In this case he or she should contact the clerk who is in charge for certificates and other documents.

The market of payment terminals is growing in Ukraine (for instance, QIWI, 24nonStop, City-Pay), that allows to replenish accounts of mobile phones, electronic payment cards; pay the bills for rent etc. Data constantly change, but for the period of five years of QIWI system functioning its summary circulation is assessed in 3, 2 billion hryven and the amount of transactions grew up to 105, 7 million [11].

There is one more sphere which attracts attention of the society. It is the sphere of education. During last ten years in Ukraine a normative-legislative basement was made for the development of e-education sector. By the beginning of 2010 a list of documents was adopted and they regulate development and application of IT in "Kyiv polytechnic institute" [12 : 6]. The list of documents includes 4 decrees of the President of Ukraine; 14 laws; 2 Decrees of Verkhovna Rada of Ukraine; 16 Decrees of the Cabinet of Ministers of Ukraine; 12 resolutions of the Ministry of Education of Ukraine.

Among the countries of the former USSR an average growth of e-education market over the last few years is not lower than 20-23 % per year. This indicator after Asia-Pacific region is the highest in the world [13].

Information technologies are widely implemented in Ukrainian schools and the process is more systemic and intensive. In September of 2010 a new project was launched by the Ministry of Education in cooperation with the Institute of innovative technologies and content of education. The project, called "Daybook" («Щоденник.ua») aims at making the only educational net for all participants of the educational process. In 2011 initiators of the project became the winner of the World Summit Award in the category "Electronic learning and education". During the year more than 3000 schools were involved in project (out of 20 000 of all secondary schools). More than 100 000 users participated in it. [5 :15].

Thus we may conclude that the project performs the function of transformation in the educational system, because it allows parents to control their children in a more dynamic regime, control their attendance of the classes, receive important information via mobile phones which inform parents not only about attendance of the school, but also their progress. Ukrainian youth actively use IT and sociological surveys prove it. According to the results of the study, conducted by Gorshenin Institute, 80 % of students daily use Internet (chats, forums and

social nets). Internet and computer games range two after meetings with friends. It is an important form of free time spending. The data correlate with the data reported by the Institute of Sociology of Ukrainian Academy of Science. The report says that in 2011 about 20 % of Ukrainians connect their leisure with computers (in 1997 the same idea was shared only by 4, 7% of people). The 21st century turned out to be a period of quick computerization and Internet development. In 2001 80 % of people couldn't use computers and only 4 % use it on a regular basis at work. In 2010 55% of people did not use computers. 15 % of people used it constantly or used it from time to time (30 %) [14].

Experts from the National Commission of communication and informatization regulations guess that in 2013 the market of IT in Ukraine exceeds 3, 5 billion dollars. The amount of high-tech services will reach 320 million dollars. Manufacture growth will contribute a lot to the diminishing of tax pressurizing on business [15].

New information epoch sets not only new tasks, but also renewed complicated vision of the economy, politics, society, science for better realization and assessment of the role of economic, social, cultural, psychological and antropological factors as well as cooperation of two spheres, such as information and innovation. Ukraine has deep traditions in the sphere of information society formation and experts who work in IT sector. We can distinguish the most important achievements in the sphere of information-communication society formation:

- Ukraine is one of the five leading countries with the biggest computer expert potential and it leads on the level of expert preparation;
- Ukrainian scholars developed new directions in the sphere of IT, such as artificial intellect, theory of self organizationm systemic analysis.

In modern Ukrainian society on the governmental level priority is given to the following information-communication directions:

- Informatization of law-enforcement agencies;
- Development of internet-technologies and formation of solid basis for the information security of people, society and state;
- Providing of a wide access to Internet for average people;
- Supplying users with various information (legislative, political etc.) about Ukraine;
- Development of services via Internet.

Ukrainian experts are convinced that Ukraine has advantages. One of them is the location of the country, which is between two civilizations. They say that there is a split beyween the West and the East and in this case Ukraine can play the role of a mediator between two sides and initiate a dialogue and serve as a ground for holding forums between the civilizations, between cultures and peoples.

Nowadays a discussion was sparked and it concerns the corrections of the project of the “Plan of Measures” taken to develop information society in Ukraine during 2007-2015. The plan was initiated by the Law of Ukraine, entitled “About major principles of development of information society in Ukraine for 2007-2015”.

According to the project a person in charge should be appointed in central and local bodies of executive power. Departments, responsible for the development and implementation of IT, should be formed in regional and district administrations. Social councils should be formed in the bodies of state governing at different levels for expert and consulting activity on the issues of information society development. An interdepartmental Council of information society development in cooperation with businesses and voluntary organizations should be formed in the Cabinet of Ministers of Ukraine.

The bill “About the peculiarities of formation and functioning of special territories prioritized for the IT development” is in the process of developing in Ukraine. The law, entitled “About the safeguard of personal data” is going to be adopted. Projects of legislative acts on the electronic trade are being developed as well as the projects of implementation and functioning of electronic payment systems, electronic stock market etc.

The major task of Ukrainian society during the period of transition to information-communication society is analysis and prevention of dangers in the sphere of information security of the state, society, personality. An urgent task now is to develop a national strategy of information-communication society which comprises measures, as follows:

- Increase level of consciousness of Ukrainian society; effectively use available resources; involve society, business and state into the development of information society;
- Consolidate social resources for implementation of political and institutional reforms in information sector;
- Precisely find the place and role for every sector whether it is state, business or community and develop partnership among them;
- Concentrate resources for the development of information-communication society with the purpose of achieving national priorities and additional involvement of investments into this sector.

In December of 2011 Ukrainian Parliament studied the topic “Formation of favourable conditions for the development of computer programming industry”. Opening the session, the first Vice-Chairman of Supreme Council of Ukraine Adam Martynyuk mentioned that ITs in Ukraine are being developed. This branch of industry gives the economy of the country more than 12 billion dollars annually. So, investments in the sphere grow. During the first half of the current year in comparison with analogous period of previous year investments increased in 2, 5 times. Adam Martynyuk was followed by the Chairman of State Agency of Science, Innovation and Informatization Volodymyr Semynozhenko and the Chairman of the Committee of Supreme Council of Science and Education Maksym Lutskyi. They stressed that IT sector is one of the most profitable and has impressive tempo of growth in comparison with other branches – from 30 up to 40 % annually. But it lacks attention from the state which will allow it within ten years to become a leader in the sphere of program production. At the same time there are some obstacles, such as imperfect tax policy, low payment etc. By the

words of V. Semynozhenko it is possible to create 168-200 thousand working places by 2015, but legislative basis should be improved.

One of the obstacles in the sphere of computer programming is the transition from handicraft methods and manufacture to industrial production of computer software. A well-developed system of measures in the sphere of legislation, standartization and economic stimulation of science and education is needed to be developed [2].

There are positive results. By the amount of certified IT specialists Ukraine occupies the fourth place in the world. The USA, India and Russia are ahead. It was mentioned in the report of the National Commission that regulates the sphere of communication and informatization. It is proved by the research conducted by «Exploring Ukraine IT Outsourcing Industry - 2012».

As a matter of fact Ukrainian IT-companies lack about 30 thousand specialists as it was said in the interview, given to “Express” by the vice-director of the company “GFK Ukraine” Glib Byshlinskii. They are needed more and more. In three year period of time the IT sphere will need more than 50 thousand specialists. “The problem is that founders of most Ukrainian IT companies are foreigners. They invest in experts (educated by Ukrainian institutions), contribute to their education on their own and then invite them to work abroad” [16: 3].

A round table session was conducted in Kyiv on the 4th of October of 2012. It was dedicated to hot issues such as preparation of high level managers in conditions of information society development and electronic governing, their problems and ways of solving. Organizers set a goal to found information ground for the beginning of the discussion, ideas’ exchange and expertise among experts, representatives of the state bodies and businesses. They found out more about innovation approaches in preparation of senior executives, new achievements in the sphere of electronic management, electronic papers circulation, ways of problem solving, related to peculiarities of legislative regulations and technological barriers on the way to electronic governing.

The first international forum on electronic governing took place in November of 2012 in Kyiv. It was named “International Ukrainian E-Governance Forum”. Electronic governing is a form of organizing of state management that helps to increase effectiveness, openness and transparency in activity of state power bodies and local administrations which widely use information-telecommunication technologies for the formation of the new type of the state, oriented to please needs of citizens, develop cooperation among state bodies and people, state bodies and businesses, state bodies themselves.

The official sponsor of the Forum was the company “Microsoft”. About 100 participants took place in the Forum. They were the representatives of the state power, commercial and voluntary organizations, scientific and higher educational institutions of Ukraine, representatives of the Russian Federation. Ukraine was represented by experts and executives from more than 27 bodies of state power, 18 higher educational institutions, 12 voluntary organizations and 40 representatives of business companies.

The problems discussed at the Forum were vital in the context of the Program of economic reforms which is being implemented during 2010-2014. It is entitled “Prosperous society, competitive economy and effective state”. Along with it there is a Plan of Actions for implementation of the “Strategy of Cooperation” for the states – members of the Union of Independent Countries in formation and development of information society for the period up to 2015.

On the 18th of October 2012 Ukrainian Association “Information security and information technologies” together with the State Service of Ukraine put a signature in the Memorandum about the intentions of the sides to cooperate and mutually support each other in situations that concern personal data protection in information and telecommunication systems. Both sides of the Memorandum will work together, solving problems of legislation, technical and information support of the measures taken to protect users, their personal data IT systems. They will also contribute to implementation and realization of reliable procedures, measures related to legislation in order to create a system of human rights’ protection as well as information protection that can contain personal data.

One of the major items on the Memorandum is the issue of developing cooperation regarding dissemination of information about the best world approaches made to protect information that contains personal data and prevent illegal access to information while forming the system of electronic governing.

The world practice shows that holding of similar Forums is an indispensable part of the country integration to the world community and starting of the process of electronic governing. On the 28th of October Ukrainian Cabinet of Ministers approved a project of the Presidential Decree “About the Strategy of information Society Development in Ukraine”, prepared by the state Agency of Ukraine. It will help to make the initiative “Open Government” real and accelerate implementation of information-communication technologies in all spheres of social life. The project of the “Strategy” was worked out by the group of experts, representatives of the National Academy of Science, leading research and educational institutions and voluntary organizations. Public discussion took place from the 24th to the 30th of July. In the process of the discussion more than 200 proposals were taken into consideration.

The basic principle of the “Strategy” is an equal partnership of state bodies, society and businesses. Its purpose is to accelerate implementation of the new ITs in all spheres of social life, develop electronic governing and electronic democracy, reach higher level of quality and accessibility of administrative services for the people and businesses, develop electronic economy, improve computer and information literacy of the people and the state clerks, openly disseminate information about activity of state bodies of power and bodies of local governing, allow citizens to participate in preparation and control of political and administrative decisions, control effectiveness of state power bodies and bodies of local administration. Having implemented the “Strategy” Ukraine will become an equal participant of the global information society [17].

On the 7th of December Cabinet of Ministers of Ukraine approved the Decree № 1153. It was entitled “About Approving of the State Program “Information and

Communication technologies in education and science during 2006-2010". Annually before the 1st of March the Ministry of Education is required to submit to the Cabinet of Ministers of Ukraine information concerning the process of the Program implementation. Ministry of Education, Ministry of Finances and Ministry of Economy should plan financial expenses for the events while preparing projects of State Budget formation and the State Program of economic and social development of Ukraine. The goal of the Program is to prepare conditions for the sustainable development of education, science, improving effectiveness of state governance by means of using information and communication technologies, guarantee rights for free search, receiving and transmitting, production and dissemination of information, prepare needed specialists and qualified users, make favourable conditions for the development of home high-tech production (competitive computer software as an indispensable component of information and communication technologies that would pave way for the economy transition to the innovative way of development).

The program includes a set of tasks, such as follows:

To make Ukrainian population more informed;

To equip educational institutions with modern computers and telecommunication services;

Implement information and communication technologies in the process of learning and conducting of scientific researches; provide access to national and world information resources;

Develop, implement and legalize program software;

Use net technical resources for the linking up of scientific and educational institutions to Internet;

Develop technologies of distance learning and use them for the implementation in Ukraine a system of learning during the whole life;

Safeguard rights of intellectual property (authors and developers);

Raise qualification of personnel;

Develop infrastructure of scientific telecommunication net, have scientific institutions, libraries, centres of scientific-technical information connected up; integrate the Net to the European academic-research net (GEANT);

Broaden nets of electronic libraries and research institutions;

Develop systems of information security of nets and information resources;

Implementation of the program will increase quality, access and competition of the national education and science in the world labor market;

Increase effectiveness of scientific researches, create conditions for effective international cooperation and solving problems; create equal conditions of access to education and science;

Increase effectiveness of state governing via implementation and spread of information and communication technologies;

Provide freedom for people to seek, get, share, produce and disseminate information;

Contribute to accelerating integration of Ukraine into the world scientific-educational space.

The above mentioned issues make it possible to come to the following conclusions:

- Ukraine has a huge potential to become a leader in the sphere of information and communication technologies;
- Forums, discussions and conferences pave way to quick changes in the sphere of IT;
- The period of transition for Ukraine should be as short as possible if we want to lead in the sphere of information technologies;
- The Government should become more active in supporting businesses that deal with IT.

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