Achieve synergy of the effects of innovation in the information business

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Abstract. In the article there are researched the main directions to achieve synergy effects of innovations in the information business. There is shown the method consolidation as a necessary condition for increasing the profitability of companies of the information field, and нейтрализации its negative factors. There are considered problems of intellectual property in the information economic. Based on statistical, studies it was concluded, that specific of software products is their biggest insecurity as intellectual property. So, often the solution of this problem is drawing up terms of patenting and licensing of this activity by the state.

1 Introduction

Globalization processes are deeply associated with the spread of scientific and technological achievements in the world. In today's environment, the application of results of scientific and technical activities in a particular area of the world is impossible. All parties of development of the international community is organically linked, so natural is the interpenetration of scientific achievements between different regions of the Earth. Inventors who provide information, interested in this process through established mechanism of receiving payment for use of the invention in the form of royalties. In another country, on another continent, in another market, or in another company, these gains can be used with greater advantage than the transmitting side.

2 Methods and types of the Earth's remote sensing

New forms of STP are also in the joint establishment and use of the products of intellectual property by international companies, in developing and performing of international scientific and technical programs. In this regard, the notion of technoglobalism was introduced in science, which is a planetary process of internationalization of the creation, development, production and commercial use, transfer, distribution of technologies [1, p.208].

The commercialization of technologies most facilitates to their spreading. Technology commercialization requires three conditions – extensive base of scientific and technological

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research, venture capital ready to be attached to the new product, talent manager, ready to manage such capital. According to Dr. Sal Kassys'ye (USA) [2], even in developed countries these conditions are not always fulfilled and this leads to the necessity of intervention in this process both the state and international organizations.

3 Results and discussion

On balance and dissemination of the availability of the international system of property is directed activity of the World Intellectual Property Organization (WIPO) – a specialized agency of the United Nations. WIPO was established by WIPO’s Convention in 1967 and received a mandate from its members to promote the protection of intellectual property throughout the world through cooperation among States in cooperation with other international organizations. Strategic direction, budget and activities of WIPO are determined by its 191 member states who sit in the assemblies, committees and other legislative bodies [3]. Now the intellectual property system plays a critical role in shaping the digital world, network space. WIPO began implementing a far-reaching program of introduction of digital regulation that reflects the impact of the Internet and digital technologies on the intellectual property system. This program touched on the use of intellectual property laws to the rules of trade and financial transactions over the Internet, copyright compliance in a global network of trade marks, patents, etc. [4].

The development of information technology resulted in the creation of new products and services such as distance learning, buying electronic goods in stores, remote management of bank accounts, entertainment and so on. Underlying many of these goods and services are works protected by copyright and works that are objects of related rights. In this connection it became necessary to make new laws by technologically advanced countries. Thus, in the U.S. there is passed the law of copyright protection in the electronic environment, regulating the use of media types in the Internet, and also prohibits the creation and sale of technologies intended for hacking devices, controlling copyright. In analyzing the dynamics of the patent in the world (fig. 1) we see that the total number of patents increases.

Fig. 1. Dynamics of patents in the world [5]

Some decline in 2015 can be explained by the corresponding recession in the world in 2013, as shown in the graph of NASDAQ index's behavior (fig. 2), which determines the position of high-tech sector companies (all graphs were taken from the site [5]). Analyzing the graphs, we see that most clearly the rise in 2010 is reflected in companies Advanced Micro Devices Inc, Cisco Systems, Inc, Dell Inc, EMC Corporation, Hewlett-Packard Co, Intel Corp, International Business Machines Corp, Lexmark International Inc, Microsoft Corporation, Oracle Corp. Further significant decline is noticeable. Experts who examined the processes of business think that it was due to events of 2014. But, as analysts of business activity point, in connection with the war in Iraq this recession ends in 2021. Then there is the rise. In the patent case, these trends are observed late in approximately 2 years. The author believes this is due to the need of some time from the beginning of investments in innovation till obtaining of scientific and technical results, the long process of obtaining patents.

This trend is also evident in the companies of the information field (fig. 3, 4). Dynamically developing companies are Advanced Micro Devices Inc., Cisco Technologies Inc., Canon Kabushiki Kaisha, Hitachi Ltd., Intel Corp., International Business Machines Corp., Microsoft Corporation. If we analyze the number of patents used, the picture is different. Since 2000, there has been a sharp drop in the number of patents used (fig. 5, 6), which may be related both to changes in economic activity worldwide and the growth of piracy, which is being fight with active measures.

This more clearly manifests in the International Business Machines Corp, Canon Kabushiki Kaisha. In the remaining companies there is steady decline in the use of patents.

Fig. 2. NASDAQ Index's behavior [6]

Fig. 3. Number of patents granted to TNCs of information field [7]

Fig. 4. The average number of patents granted to TNCs of information field [8]

Fig. 5. Number of patents used by TNCs of information field [8]

Fig. 6. The average number of patents used by TNCs of information field [8]

In the context of innovative measures there was introduced the concept of information society. Formation of information society is possible only with the consolidation of public and business sector. And that is the basis in implementing the ideas of the project "Electronic Russia", which is the push of consistent informatization of our country’s society in all levels of its development.

In international cooperation the perspective direction is coordination of activity in the information field with the countries of Eastern Europe and Central Asia. The priorities of this cooperation are a regional partnership, the introduction of electronic communication at the level of state sector, consulting on information security as in the middle of each country so in cooperation between states, informatization of export, media services and so on.

For Russian companies, the situation is characteristic when it is only the material resources that are evaluated in identifying the innovation project cost – without taking into account the cost of intellectual property rights. Therefore, the economic effect of the innovation projects implementation turns out to be significantly understated. Underestimating the intellectual resources leads to losing the edge over the competitors and affects the company's prestige that is inseparably connected with the competitiveness of the innovations created [7].

The common disadvantage of the existing IPO evaluation methods (the rate of return, the market and the discounted cash flow ones) is the complexity of identifying the input parameters and low validity due to using a large quantity of forecast data, which renders them inapplicable in fulfillment of large-scale projects of knowledge-intensive innovations creation. Hence the methods for evaluating and licensing the IPO are necessary which could be applied to conditions of a manufacturing company in information economy.

In order to efficiently manage the IPO of an innovation creation project, they have to be structured first. During structuring, the list of the IPO is determined, they are classified, the economic efficiency and effect of the IPO implementation at the enterprise are evaluated, and recommendations are given on further commercial use of the IPO in the project.

For finding out the possible further income from using the project's intellectual resources at the stage of its development, the IPO evaluation method has to be selected according to which its further commercialization will be conducted.

The method of identifying the economic efficiency of the IPO is based on calculating the future cost of the IPO at the end of the patent validity period. When using the method, the license payment values are taken as cash flows. As the commercial importance index of the IPO, the cumulative net cash flow (NCF) value was selected.

The net present value (NPV) shows the distribution of cash flows in the course of fulfillment of the information project. Using this index, the project manager monitors the increase or decrease of profits from the project implementation [9]. The project profitability index (PI) serves as the final characteristics of the project in this method.

For the formation of civilized market of information technologies in Russia it is necessary to unite the efforts of developers of information systems. Significant role in this process plays the Association of Computer and Information Technology Enterprises in Russia.

The purpose of the Association is to strengthen efforts to promote competitive products of Russia companies in foreign markets, the merging of scientific and industrial potential of Russia for software creation, which meets international standards, and also conditions for further development in the field of information technologies [10]. The Association operates in the popularization of Russia IT products in the export market, foreign investments, improving the existing legislation, promoting research activities in the field of information technologies.

In the world such functions World Alliance of Information Technologies and Services, which includes the main Associations of 46 countries and covers about 90% of the world market, being, in fact, a monopoly of this market [11]. Through the joint efforts of the Association's members there are implemented many innovative projects in the field of information technologies [12]. One of them was the program "Job Search", established by Association "Softline", which allows free job search with the help of information system designed for mobile phones.

4 Conclusions

The main directions to achieve synergy effects of innovations in the information business are the use of inventions in the form of royalties, globalization technologies' commercialization, balancing of the international ownership system.

It is found that a necessary condition for increasing the profitability of companies of the information field is the consolidation, which is achieved through mergers and acquisitions. Consolidation has several disadvantages. First, companies can not immediately get planned profit. Merger of companies leads to the disappearance of the conditions for effective implementation of competition. These processes lead to market's monopolization by largest companies. An instrument of struggle for the market of information technologies in the world is opened dissemination of a company's information system.

Specific of software products is their biggest insecurity as intellectual property. So, often the solution of this problem is drawing up terms of patenting and licensing of this activity by the state.

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