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INFORMATION SYSTEM OF LEGAL PROTECTION OF INTELLECTUAL PROPERTY

Abstract. The article analyzes the state of the problem of developing an information system of legal protection of intellectual property. Features of the concept of "intellectual property" are considered. The authors analyze the use of information and telecommunication systems in the field of legal protection of intellectual property. Possibilities of intensification of information process development in the field of intellectual property protection are shown and analyzed. A database has been developed to solve the problem of intellectual property legal protection software.

Keywords: information, Informatization, information systems, legal protection; intellectual property.

Introduction

Today, modern information and communication technologies are used in the activities of almost every enterprise and organization. The modern century is characterized by intensive development and implementation in all spheres of life of the IT society. This is reflected in the intensive improvement of computer and communication technology, the emergence of new and further improvement of existing information technologies, as well as the introduction of applied information systems. Advances in computer science have played an important role in organizational management, industry, research and computer-aided design.

Informatization affected the social sphere: education, science, culture, medicine. Informatization - a set of interrelated organizational, legal, political, socio-economic, scientific and technical, production processes aimed at creating conditions to meet the information needs of citizens and society through the creation, development and use of information systems, networks, resources and information technologies. It is a process of large-scale use of IT in all spheres of socio-economic, political and cultural life of society to improve the use of information and knowledge for management, meet the information needs of citizens, organizations and the state and create conditions for the transition to information society.

Analysis of recent research and publications.

The issue of developing an information system for the legal protection of intellectual property should be explored, starting with the analysis of the concept of "intellectual property". In particular, A. Aksyutina, O. Nestertsova-Sobakar, V. Tropin, O. Tropina believe that intellectual property is the result of intellectual, creative activity that meets the requirements of current legislation [20. p.20-23]. The following lawyers studied various aspects of this issue: Yu. Atamanova, V. Dmitryshyn, A. Abdullin, O. Kokhanovska, U. Parp N. Hrushevska considers the problem of protection of legal protection of computer programs as a product of intellectual activity, and S. Vodorezova investigates the

peculiarities of legal protection of computer program as an object of information relations [1, 6]. V. Golubev, V. Gavlovsky, V. Tsymbalyuk investigate the problem of combating crimes in the field of computer technology [3, p.19]. All opinions and results of researches of experts have allowed to draw a conclusion concerning urgency of the set task of development of information system of legal protection of intellectual property. S. Petrenko, K. Efremova and others [2- 4]. N.Hrushevska considers the problem of protection of legal protection of computer programs as a product of intellectual activity, and S. Vodorezova investigates the peculiarities of legal protection of computer program as an object of information relations [1, 6]. V. Golubev, V.Gavlovsky, V. Tsymbalyuk investigate the problem of combating crimes in the field of computer technology [3, p.19]. All opinions and results of researches of experts have allowed to draw a conclusion concerning urgency of the set task of development of information system of legal protection of intellectual property. Namely, there is a problem in studying the mechanism of using computer programs in information relations and protecting the interests of their authors.

Main part

Communication systems and networks are one of the components of the information infrastructure, the main component for information. The development of communication determines the possibilities of implementing user access to information networks, systems and resources, obtaining a wide range of information services. The effectiveness of providing public administration bodies, economic entities of various forms of ownership, mass media and the population of the country with information and telecommunication services largely depends on the effective combination of different communication systems. The vast majority of institutions use public switched data channels. There is a well-developed network of analog transmission lines, which have now exhausted their technical capabilities. Modern communication systems based on digital information transmission methods provide better and more reliable communication [1].

Ensuring the computerization of strategic areas of statehood, security and defense means, in particular, the creation of appropriate automated, information and analytical systems and networks. The first stage of the information-analytical system of the Accounting Chamber has been introduced, which is a key element of the unified automated system of state control over the execution of the state budget. Within the information and analytical system of the Court, the second phase of the creation of a repository and communication node of e-mail for communication with public authorities and organizations is being completed [1, 2].

There are various information and telecommunication systems in the regions of Ukraine, designed to ensure the performance of administrative functions, financial and budgetary issues, taxation, science, education, health care, social protection, etc. It should be noted that in the process of creating information systems, databases and data banks, developers and users are slowly moving to modern tools such as Oracle, Informix, Sybase and more. Obsolete tools such as Clipper, FoxPro, etc. are commonly used. At a low level, developers are "armed" with the necessary tools and technologies to support engineering, creating computer systems with complex distributed applications.

Unfortunately, the activities of state bodies and organizations in the design and use of information resources are inconsistent, which leads to some difficulties in creating a single information environment and, as a consequence, a low level of information and analytical support of state bodies. Today, electronic information resources of interest to the executive and the legislature already exist or are being created. Uncertainty about the legal and financial base of various entities working in the field of computerization leads to a monopoly on the information of management and business structures on open public information resources, depreciation of the cost of public information resources and restrictions on the right to use.





A common feature of sectoral programs is the improvement of public administration by computerizing the activities of relevant executive bodies and their features are manifested in the forms of information support of industry and ways to provide information

resources to third-party users. The issue of attracting foreign and domestic investment in computerization projects remains relevant. Despite some changes in this direction (for example, a computer information network of education, science and culture has been created at the expense of foreign sponsorship resources), the possibilities of intensifying this process remain unrealized.

To implement the database, the software environment was chosen - dbForge Studio for SQL Server. dbForge Studio for SQL Server is an environment for developing SQL Server databases, generating data reports, analyzing them, and performing basic administration tasks. dbForge Studio speeds up everyday tasks and allows you to make comprehensive changes to the database. Features of dbForge Studio for SQL Server: accelerate SQL code writing in a user-friendly scripting environment; generate and re-create tables without data loss; comparison of databases, synchronization of schemes and data; analysis of the interdependence of objects when changing databases with a complex structure; automatic deployment of databases on the work server; preparation of reports and automation of their distribution; fast and efficient security management in databases [3-5].

The designed and developed database will contain tables that correspond to the entities inherent in the field of legal protection of intellectual property: «CopyrightHolder» - the owner of copyright; «Work» - work that is the subject of intellectual property; «License» - work license; «InfringementAct» is an act of infringement; «InfringingWork» is work that infringes intellectual property rights; «Infringer» is an infringer; «CourtVerdict» is a court decision; «Liability» is a liability; «HolderWork» is an auxiliary spreadsheet. language such as "many to many".

After directly creating each of the tables, set the required data types for the columns, indexes, and constraints where necessary. The operation of the search queries was checked by selecting the "Execute" context menu item in text mode, which led to the output of the data selected by the query. The figure below shows that the query extracts basic information from the database and provides it in a convenient way (Fig.1).

CopyrightHolderName varchar(35)	WorkTitle varchar(100)	WorkImage image	InfringerName varchar(35)
→ Apple Inc.	Magic Keyboard		Pro Electronics Corp
Microsoft	Windows		Free OS Group
Adidas	Adidas		Huaneng Boots International, Inc.
Billie Eilish	No time to die		Peter Parker




InfringingWorkTitle varchar(50)	InfringingWorkImage image	ActDate date	CourtDate datetime	Verdict varchar(50)
Pro Keyboard		07.10.2021	26.11.2021 20:58:47.797	(null)
Windows Repack		15.10.2021	22.10.2021 20:59:59.490	Guilty
Abibas Boots		15.09.2021	22.10.2021 21:00:56.890	Guilty
14th Game	(null)	29.09.2021	05.10.2021 21:01:53.103	Justified

Fig. 1. The results of the query

For each database that is implemented, you need to perform a series of tests to minimize future usage problems. In software products, data is transferred from the user to the internal database and vice versa. Database testing is the verification of various aspects related to the database, including the reliability and integrity of the data. The basic testing of the created database was carried out, namely the structure check: CRUD-testing (C (Create) - check the storage of any new transaction (operation "insert"); R (Read) - check the viewing or search of any saved transaction (operation "select"); U (Update) - update an existing record ("update" operation); D (Delete) - check the deletion of any record ("delete" operation); ACID testing (A (Atomicity) - transactions can be described by the phrase "all or nothing"; C (Consistency, consistency) - only real data is stored; I (Isolation, isolation) - transactions do not affect each other; D (Durability, durability) - recorded data will not be lost.

Conclusions

The rapid development of digital technologies is changing the reality and the manufacturing sector around the world - modern companies have access to more data than ever before. Progressive organizations can now use databases and informatization mechanisms in general to move from simple data storage and basic transactions to analyzing large amounts of data from multiple systems and optimizing many processes. With databases and other computing tools and business analysis, today's organizations can use the data collected to work more efficiently, make decisions more efficiently, and be more flexible and scalable. The ability to create and use databases gives users control and autonomy while maintaining important security standards.

The creation of an information base of intellectual property rights is due to the existence of certain objective grounds and reasons.

First, the need for legislation and consolidation of non-property and property rights of creators (authors) to their works, as well as the rights of society to access these works. Secondly, the need for the state, represented by its government and authorized bodies, to ensure the sustainable development of the country's economy using the latest technologies, by encouraging initiative and creativity, dissemination and application of creative work, and promoting free trade for economic and economic interests. social development of society. Third, to integrate into the world community, through the design, development and implementation of modern software in the legal field.

During the study, a database for the legal protection of intellectual property was developed, which allows you to conveniently store data on a wide range of aspects of this area. The following actions were performed when solving the task: created database structures (initial formation), indexes and index expressions for tables (to further establish relationships between tables); the tables were filled with information; tables are linked by foreign keys (one to one, one to many and many to many); developed the necessary queries to solve the problems that were set in the condition. The customer base was compiled, scheduled meetings and tasks were specified, and notifications were set for them.

Thus, the goal of developing an information system of intellectual property rights is to protect the interests of authors and other creators of intellectual property, by giving them certain defined, limited time rights that allow them to dispose of these results, control their use by third parties, to obtain a certain economic effect from such use. In the process of designing the information system, it was taken into account that these rights apply not only to the material object in which the result of creative work is embodied or may be embodied, but to the product of the human mind as such.

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Інформаційна система правового захисту інтелектуальної власності

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Анотація. Стаття аналізує стан проблеми розробки інформаційної системи правової охорони інтелектуальної власності. Розглянуто особливості поняття «інтелектуальна власність». Авторами виконано аналіз використання інформаційно-телекомунікаційних систем в сфері правової охорони інтелектуальної власності. Показані та проаналізовані можливості інтенсифікації розвитку інформаційного процесу в сфері охорони інтелектуальної власності. Розроблено базу даних для вирішення проблеми програмного забезпечення правової охорони інтелектуальної власності.

Ключові слова: інформація, інформатизація, інформаційні системи, правова охорона, інтелектуальна власність.