Abstract---The purpose of this study was to analyse and investigate the modifications of the development of intellectual property rights in modern realities, followed by the authors’ proposals to improve its evolution and adaptability. According to the results of the study, the sphere of intellectual property currently differs not only in the implementation and protection of rights compared to the original approaches laid down by the developers of the current Civil Code and branch-related special legislation, but also in the change in the paradigm of creative activity in information networks. Based on the provisions of several European Union Directives, the authors concluded that legal regulation in the field of intellectual property in Ukraine should be based on the experience of EU countries and conventional legal constructions known to national legal science, and use the principles inherent in this field in the Civil Code of Ukraine, including method of regulation, functions, terminology, etc. The proposals expressed in this study are aimed at further research of intellectual property rights in the information society and help to find an answer to the main question – what should be the updated legislation in the field of regulation of intellectual property relations in the context of updating the Civil Code of Ukraine and civil legislation, taking into account modern European and world trends.

Keywords---civil approach, civil code, copyright, legal regulation.
Introduction

The fundamental principles of development of the modern mechanism of legal protection of the rights to separate objects of intellectual property were laid down in the 1990s by the Constitution of Ukraine (Uкраїна, 1996) and by gradual accession to several international acts in the field of intellectual property rights. At the same time, in terms of important achievements of the existing regulation of the Book Four of the Civil Code of Ukraine, firstly, the current Civil Code of Ukraine has significantly expanded both intellectual property rights and certain provisions on regulation of intellectual property law institutions; the Book contains a chapter on the general provisions of intellectual property rights, which should also be called an achievement. Secondly, since the adoption of the Civil Code of Ukraine, intellectual property relations have been regulated in a separate structural part of the Code – Book Four, which fully defines both the role and importance of intellectual property relations in national legislation; and this, in turn, emphasised their private law nature and the complexity of all legislation in this area; thirdly, the location of an integral array of rules governing intellectual property relations on virtually all objects of intellectual property rights known at the time of adoption of the Civil Code of Ukraine, emphasised their importance and impact on society, the need for the Book One to comply with General Provisions on intellectual property rights, put the person (creator) at the centre of the system of regulation of relevant relations, providing a terminological basis for understanding the concepts of objects, subjects of rights, protection and defence of these relations, etc.

Notably, non-property and property rights most clearly coexist today in the field of intellectual property rights and information rights, including through the Books One and Four of the Civil Code of Ukraine, and the right to creativity is enshrined in the Constitution of Ukraine and several international regulations, which Ukraine joined. The Book Two of the Civil Code of Ukraine also consolidates the right to creativity as a personal intangible right of every individual. Therefore, an intangible, incorporeal intellectual property rights are currently important for man (creator) no less, and sometimes even much more than material (exclusive) intellectual property rights. The adoption of the code was aimed at further detailing and improving regulations in the field of copyright as a separate institution of intellectual property rights through the adoption of laws, bylaws, which would guide and develop contemporary legal mechanisms for implementing and protecting the rights of creators and other subjects in this field. However, since the adoption of the Code, national legislation in the field of copyright protection has not changed, a number of truly progressive provisions of the Civil Code of Ukraine have not yet received support and development in special laws, which suggests the lack of proper influence of the Civil Code of Ukraine on legislation in this area (The Civil Code of Ukraine 2003).

Well-known and prominent Ukrainian and foreign scientists such as Pidoprigora (1985); Azimov (1981); Matveev (2013); Dovgert (2009); Kuznietsova (2021); Kapitsa et al. (2006); Yakubivsky (2019); Nosik (2006); Ulyanova (2015); Kryzhna (1999); Bazhanov (2014); Begova (2009) and a number of other civilists and subject matter experts studies the problems of the improvement of theory and legislation in the field of intellectual property rights. In contrast to the studies of
these authors, this paper offers generalisations on the positives of the current regulation of intellectual property rights, lists some unresolved issues, describes the relations of intellectual property in combination with information relations and offers ways to update civil legislation, including the Book Four of the Civil Code of Ukraine, for the development of modern legislation consistent with world standards and standards of EU countries. A civilistic view of all the issues raised in this study allows to consider the problems from a new perspective and offer comprehensive options for their solution, taking into account the prominent place of the Civil Code of Ukraine in these processes. The purpose of this study was to analyse and study the modifications of the development of intellectual property rights in modern realities, followed by the authors' proposals to improve its evolution and adaptability (Marek, 2014; Cui & Qi, 2021; Dalal & Chahal, 2016).

Materials and Methods

The methodological framework of the study included general philosophical approaches, as well as general scientific and special scientific methods of cognition, which correspond to the main purpose and performance of the tasks set by the authors. In the process of scientific research, the dialectical method of scientific cognition was used, in application of which the principles of development, objectivity, and comprehensiveness were taken into account. The dialectical method allowed to substantiate regularities of legal understanding of essence and role of regulation of relations in the field of intellectual property relations, in particular in civil law. The anthropological approach clarifies the legal nature of the legal framework for the development of a system of intellectual property rights. An important place in the process of studying the legal nature of intellectual property rights is occupied by the synergetic method, which identified the specifics of certain types of objects and intellectual property rights. The use of methods and techniques of logic allowed to generalise the approaches presented in the doctrine to the disclosure of the legal nature of intellectual property rights.

The historical and comparative method became the basis for identifying common and different in the legal regulation of intellectual property relations at different stages of development of this industry (Janku, 2014; Apetrei, 2014; Yasmin, 2016). Through the method of complex analysis, an attempt was made to solve complex theoretical and practical problems through interrelated sciences, such as philosophy, information science, sociology, etc. The method of system analysis is widely used in the study as the main in the process of research of theoretical bases of regulation of relations in the field of intellectual property. In turn, the methods of generalisation, synthesis, analysis, abstraction allowed to carry out research to identify certain types of relations in the field of intellectual property law and the specifics of their legislative regulation. The formal-legal method was used in the analysis of the content of international documents that contain standards of legal regulation of intellectual property relations, the practice of the European Court of Human Rights, as well as national legislation of Ukraine. In conclusion, the study used a theoretical and prognostic method, which developed proposals for improving and updating the civil legislation of Ukraine in the field of intellectual property rights.

The authors first turn to the analysis of the current process of reforming European copyright and the content of the draft EU directive "On copyright in the
digital single market”, which is considered in the expert community as a response to new challenges in the information society (Directive EU, 2019). Particular attention is paid to foreign legislation and theoretical work of foreign legal scientists and specialists in the field of intellectual property rights, the significant difficulties and dangers these scientists warn about when it comes to the virtual world of information systems and networks, and the endless possibilities of disseminating their creative work, familiarising with them and receiving rewards for creative work. In summary, the authors provide specific recommendations for updating the provisions of the Book Four of the Civil Code of Ukraine and proposals for changes in legislation in the field of intellectual property rights, taking into account the specific features of creative activities. A civilistic opinion on all the issues raised in this study allows to consider the problems from a new perspective and offer comprehensive options for their solution, taking into account the prominent place of the Civil Code of Ukraine in these processes.

Results and Discussion

Analysis of the Main Issues of Current Civil Legislation in the Field of Intellectual Property

With the signing of Ukraine's Association Agreement with the EU (hereinafter referred to as "the Agreement") in 2014, the foundation was laid for introducing the existing regulatory framework not only of the Civil Code of Ukraine, but also of the concept, general approaches outlined in the Agreement, in particular to the provisions of Chapter 9 of the requirements and standards for the protection of intellectual property rights. In addition, the Concept of reforming the state system of legal protection of intellectual property in Ukraine should also be mentioned, which was approved at the time by the Order of the Cabinet of Ministers of Ukraine No. 402-r of June 1, 2016.

The first real changes aimed at updating the legislation in the field of intellectual property began in 2017 and continue to this day. In recent years, there have been some fragmentary but really important clarifications on a number of objects of rights, improvement of the whole array of legislation in the field of intellectual property and the practice of protection of these rights in court. Meanwhile, the negative points were manifested in the frequent cases of discrepancies between these proposals, changes, and judicial practice with the doctrine of civil law, the concept of the current Civil Code of Ukraine, which explains the inability of the entire intellectual property system to undergo systemic transformations without taking into account the theoretical basis and ideology of civil legislation. Despite the fact that the current Civil Code of Ukraine contains a considerable list of rules governing personal non-property relations in the field of the right to information and other information rights, it does not provide a systematic legal material on personal non-property rights to information and other information rights. Therefore, consistent provision of positive regulation of the content of personal non-property information rights is not on the agenda so far. Thus, the Civil Code of Ukraine does not yet contain the provisions that would fully regulate information relations, taking into account the specific features of new technologies, virtual environment and the needs of the global information society, taking into account the place of personal intangible rights to information,
proposals for implementation and protection of personal non-property right to information of individuals and legal entities. Meanwhile, this has an impact on the regulation of intellectual property rights, in particular to find common ground and differences in civil law regulation (Everett et al., 2016; Kornienko, 2015).

Book Four of the Civil Code of Ukraine was based on the theory of exclusive intellectual property rights and, despite the existence several other theories in this area, this theory has proven its importance, practical value, and ability to solve problems of copyright as the most developed institution both in particular cases, during use in copyright contractual relations and during protection of these rights; the discussion on the application of other theories or their combination did not provide grounds for changing the central theory, which currently underlies all relations of intellectual property rights in Ukraine. The Book Four of the current Civil Code of Ukraine constitutes a holistic system of provisions that are developed according to the unified principles and are based on a single method of regulating social relations; it deals with the rules governing the relations of intellectual property based on equality, free disposition, inadmissibility of interference in the sphere of personal life of an individual; judicial protection of any violated civil right; justice, good faith, reasonableness, etc., which emphasises its close connection with the Book One. The practice of implementing the provisions of Book Four of the Civil Code of Ukraine has demonstrated that regulations of current legislation that contain civil law provisions and regulate intellectual property relations, regardless of whether they are purely civil or complex, in their civil law part, the regulations must be subject to the general provisions of the sub-branch of intellectual property rights contained in the Civil Code of Ukraine; provisions of this book currently allow to emphasise the commonalities and differences in the regulation of civil information relations and intellectual property relations, which requires further detail in the Civil Code of Ukraine (Mervartova, 2014; Dobrilă, 2013).

Book Four of the Civil Code of Ukraine as a whole, as well as some of its provisions during its existence have proved their effectiveness both in theory and in practice, including due to the fact that the provisions of the Agreement came into force before their entry into force, and at the level of special laws, but this process subsequently slowed down. Therefore, some theoretical and practical problems still remain relevant. The issue of compliance of the content of Article 421 of the Civil Code of Ukraine also requires theoretical understanding. According to this article, the subjects of intellectual property rights are the creator(s) of the object of intellectual property rights (author, performer, inventor, etc.) and other persons who own personal non-property and (or) property rights of intellectual property in accordance with this Code, other law or agreement. In the Book One of the Civil Code of Ukraine, the categories "person" and "participant in civil relations" are distinguished: under Article 2 of the Civil Code of Ukraine persons are individuals and legal entities., and the category "participant in civil relations" includes individuals and legal entities, as well as subjects of public law: the state of Ukraine, the Autonomous Republic of Crimea, territorial communities, foreign states. The subjects of intellectual property rights are formally only the creator(s) and other individuals and legal entities to which intellectual property rights belong. The state of Ukraine, territorial communities, foreign states or international organisations as subjects of public law, according
to the current wording of Article 421 of the Civil Code of Ukraine, are not subjects of intellectual property law (The Civil Code of Ukraine, 2003). To overcome this discrepancy, the doctrine proposes to apply an expanded rather than a literal interpretation of the text of the legislative act, interpreting the subjects of intellectual property rights not only as individuals and legal entities, but also as other participants in civil relations. Experts point to the need to close this legislative gap.

Discussions are ongoing on supplementing national legislation with requirements for the protection of critical and scientific publication of works that have become common property. The problem is that the proper system of activities of collective management organisations has not yet been established; the search for an appropriate legal model remains relevant. Therewith, the Law of Ukraine "On the effective management of the property rights of copyright holders and (or) related rights" cannot be recognised as such that provides adequate answers to all issues of the activities of collective management organisations.

At the doctrinal level, the conflict of legal regulation in the field of intellectual property is still being discussed, which should be resolved in favour of the Constitution of Ukraine and the Civil Code of Ukraine. In particular, with regard to Article 429 of the Civil Code of Ukraine, which governs the distribution of intellectual property rights to objects created on the basis of an employment contract (property rights to such objects belong jointly to the employer and the employee who created such objects, unless otherwise stipulated by the employment contract) and special laws on intellectual property, which contain provisions that the exclusive property right to a work or official invention belongs to the employer, unless otherwise stipulated by the employment contract and (or) civil contract between the author and the employer.

Thus, part 2 of Article 1114 of the Civil Code of Ukraine establishes the provision that the fact of transfer of exclusive property rights to intellectual property is subject to state registration. Such exclusive rights include rights to objects of patent law, for example, the layout of an integrated microcircuit and trademarks; these rights take effect from the moment of their registration, and an agreement on the transfer of property rights to such objects is considered valid from the moment of its state registration. Special legislation contains other requirements for state registration of agreements on the transfer of rights to industrial property objects, establishing the optional nature of such registration. It is necessary to eliminate the conflict, taking into account the provisions of the Civil Code of Ukraine.

The problem is that the provisions of Chapter 41 of the Civil Code of Ukraine "Intellectual Property Rights for Innovation Proposal" and Chapter 38 "Intellectual Property Rights for Scientific Discovery" are somewhat outdated: rationalisation was aimed at improving already known technical, technological, or organisational solutions, was mass and accessible, but currently inventors have the opportunity to use other ways to protect the results of their technical work, patent as an invention or utility model, design as an innovation proposal (it is in the case of patenting that the owner of a security document receives real intellectual property rights). In general, Chapter 41 of the Civil Code of Ukraine consists of only four
Due to the lack of special legislation, the legal protection of scientific discoveries in Ukraine is not provided at all, and the provisions of Chapter 38 of the Civil Code of Ukraine are not actually implemented. It has been repeatedly proposed to include the scientific discovery in the objects of information rights, because even this category is defined through the concept of information, and its regulation in Book Four was intended to emphasise its importance as a result of information of outstanding importance, to give the name of the person(s) who made the discovery, and/or give the name at their discretion, consolidating the rights in a special way that can be fully implemented through the institution of information rights. Thus, this can be carried out, accounting for trade secrets as well, in the Book One, during determining and placing the discovery among the objects of civil rights of Article 200 of the Civil Code of Ukraine.

Changes and Amendments to the Legislation in the Field of Intellectual Property Rights: Key Proposals

What are the most important changes and amendments proposed to the legislation in the field of intellectual property rights in the national scientific doctrine? To summarise, they come down to the following:

- Article 418 of the Civil Code of Ukraine (definition of intellectual property rights) states that intellectual property rights are "the right of a person to the result of intellectual, creative activity or other object of intellectual property rights defined by this Code and other laws". Thus, the concept of "intellectual property" is defined through the concept of "object of intellectual property", which does not give a correct idea of the category in question and requires the attention of the legislator;

- Article 52 of the Law of Ukraine "On Copyright and Related Rights" regarding the determination of the amount of compensation as a special method of judicial protection of copyright changed the wording in connection with changes proposed by the Law of Ukraine "On State Support of Cinematography in Ukraine" (Law of Ukraine No. 1977-VIII, 2017). The previous version, according to experts, had a more effective application for judicial protection of copyright;

- Civilists are also asked to resolve the conflict between the provisions of Article 430 of the Civil Code of Ukraine and Article 1112 of the Civil Code of Ukraine: for example, according to Article 430 of the Civil Code of Ukraine, intellectual property rights to an object created to order belong jointly to the creator and the customer, unless otherwise stipulated by the contract, and in accordance with Article 1112 of the Civil Code of Ukraine, the contract for the creation to order and use of intellectual property must contain provisions on methods and conditions of use of intellectual property by the customer. Thus, intellectual property rights as such do not pass to the customer, but must be specified in the contract. The current legislation does not contain details of this legal provision. It is proposed in the legal
literature to use the special provision of Article 1112 of the Civil Code of Ukraine on par with the wording of Article 430 of the Civil Code of Ukraine; 

- new laws in the field of intellectual property rights – the Law of Ukraine "On the Protection of Rights to the Layout of Semiconductor Products" and the Law of Ukraine "On the Legal Protection of Geographical Indications" changed the term "topography of an integrated circuit" to "layout of a semiconductor product" (these changes were also introduced in the Civil Code of Ukraine); introduced provisions on the refusal to divide the indications of origin of goods into simple and qualified; established the term "geographical indication", amended the subjects of the right to geographical indication, etc., but the second of these laws applies only to the protection of intellectual property rights to geographical indications – mineral waters (wine products, as well as food products, are not indicated as protected); therefore, refinement is required (Law of Ukraine No. 111-IX, 2019; Law of Ukraine No. 752-XIV, 2019);

- a number of technical errors should be eliminated, which have repeatedly drawn the attention of both scientists and practitioners: 1) the provision of Part 4 and the provision of Part 6 of Article 488 of the Civil Code of Ukraine, which regulate the validity of intellectual property rights, coincide literally; 2) in accordance with Part 3 of Article 1122 of the Civil Code of Ukraine, "the term of the contract, according to which the user has the right to sell goods (perform work, render services) exclusively to a certain category of buyers (customers) or exclusively to buyers (customers) who are located (place of residence) in the territory specified in the contract". The legislator omitted the final phrase – "shall be null and void", therefore, the elimination of this substantial omission will allow Part 3 of Article 1122 to acquire legal meaning, etc.

Several provisions of the current legislation, which need to be harmonised with the provisions of the Agreement, are also noteworthy. Thus, in contrast to the Civil Code of Ukraine and the current Law of Ukraine "On Copyright and Related Rights", the Agreement establishes the possibility of not substituting the right to follow the resale of the original work of art, if the seller purchased the work directly from the author less than three years before resale, and if the resale price does not exceed a certain minimum amount. Therefore, it is necessary to regulate the issue of the right of succession in accordance with the provisions of the Agreement. Taking into account the wording of Article 181 of the Agreement, the provisions of Article 429 of the Civil Code of Ukraine on relations for the creation of computer programmes in the performance of an employment contract are subject to appropriate changes (namely as specified in the Agreement: if the computer programme is created by an employee in the performance of their duties or in accordance with the instructions of the employer, then the employer owns all exclusive property rights to the created computer programme, unless otherwise stipulated by the contract). In the field of patent law, attention is drawn to the provisions of the Agreement that relate to the protection of inventions in the field of healthcare and in the field of biotechnology, in particular, the Agreement contains an obligation to provide an additional period of protection for a medicinal product or plant protection product, which is protected by a patent and was subject to an administrative procedure granting permission – additional security certificate. Provisions of Articles 197 and 198 of the Agreement stipulate the
possibility of cancellation of trademark registration if during a continuous five-year period it has not been put into use in the relevant territory for the goods or services in respect of which it is registered, and there are no proper reasons for non-use.

In contrast to the provisions of the Agreement, the Law of Ukraine "On Protection of Rights to Marks for Goods and Services" establishes a three-year period of non-use of the mark, which may be grounds for early termination of the certificate. The regime of legal protection of industrial designs established under the Agreement differs from that of national legislation in terms of the protection of industrial designs, since the Agreement, apart from innovation, also indicates an individual level. In Article 465 of the Civil Code of Ukraine, legal protection is granted to a registered industrial design for a maximum period of 15 years, the term of protection of industrial designs under the Agreement is at least five years. In addition, the right holder may renew the term of protection for one or more five-year periods up to a total period of 25 years from the date of application, and the term of protection of unregistered industrial designs is at least three years from the date the sample was made public. This should be taken into account in the Civil Code of Ukraine, as well as to establish legal protection for both registered and unregistered industrial designs that meet the requirements of the conditions of legal protection (Svitnev, 2010; Mingaleva & Mirskikh, 2013).

Taking into account all the above, the systematic updating of the Civil Code of Ukraine will restore the leading role of the Civil Code of Ukraine in shaping the system of legislation in the field of intellectual property rights, emphasise the need for an effective system of legal mechanisms for implementation and protection of intellectual and creative rights. It will also remain one of the most urgent tasks for the coming years. Consistent and critical understanding of the doctrine of civil law in the process of updating Book Four of the Civil Code of Ukraine, taking into account the achievements of international opinion and the provisions of international instruments will bring the Civil Code of Ukraine and intellectual property law to the current level with other leading countries. It is necessary, among other things, to understand that the systematisation of special laws, especially at the level of any codes (for example, the Industrial Property Code) should be rejected as contrary to the very idea of codification of intellectual property rights at the level of the Civil Code of Ukraine as the main document for governing these relations; since it is the Civil Code of Ukraine that carries the basic "legal code" of intellectual property relations and corresponds to their private law nature, the needs of creators, which is emphasised by the provisions of the Books One and Two of the Civil Code of Ukraine. This does not preclude taking into account and studying the experience of codification of intellectual property in a number of European countries, namely parts of industry codes, which set out the general provisions for all objects, such as Administrative Procedures, Appeals, Infringements of intellectual property rights, Fees. The codes also contain sections on individual objects of intellectual property rights.

Discussions on the basic theory underlying Book Four of the Civil Code of Ukraine at this stage of the development of the doctrine of civil law should be considered inappropriate, because, despite the proposals that are still expressed in the literature, the vast majority of Ukrainian civilists do not object to the
interpretation of intellectual property rights as exclusive rights. In the process of adopting special legislation, which is appropriate to develop and take part in its formation and improvement, including for the purpose of detailing the provisions of the Civil Code of Ukraine, one should carefully record the shortcomings of these documents in order to avoid mistakes as in regulation at the level of the Civil Code of Ukraine (since it is advisable not to change the main statutory array of the code for a long time after the update), and at the level of special legislation. It is possible, thus, to move in parallel, taking into account, for example, that the draft Law of Ukraine "On Copyright and Related Rights" has been prepared, which was published on the website of the Ministry for Development of Economy, Trade and Agriculture of Ukraine and has many shortcomings; that the Verkhovna Rada of Ukraine has also submitted draft laws on the reform of patent legislation, on the protection of trademark rights, industrial designs and on the fight against patent trolling, on the establishment of national intellectual property authorities, etc. After the updating, the Civil Code of Ukraine should remain the main codified act in the field of regulation of relations in the field of intellectual property rights. Considering the commitments made by Ukraine under the Association Agreement with the EU, it is also necessary to pay attention to the acts of the acquis communautaire, which primarily concern the right to information.

**Conclusion**

Summing up, it should be noted that Book Four does not require radical changes; in addition to a number of provisions on the nature of information objects and the correction of obvious errors, does not require a code to take into account all the provisions of the association and all EU directives – it is rather a matter of special legislation. In addition, all the provisions of Book Four must comply with the spirit and principles of civil law, be analysed for their effectiveness, feasibility, correct wording and the absence of conflicts; in the process of formulating specific provisions of the Book Four, additions should be made in order to clearly emphasise the common and the differentiation in the provisions on objects, property and personal non-property rights and other aspects between the institutions of intellectual property law and information rights. The codification of special laws in the field of intellectual property rights, as well as their development, are considered unnecessary, because everything necessary can be done at the level of the Civil Code of Ukraine and special laws, and there is a need to systematise the subordinate legislation. If such codification is still carried out, it may significantly complicate the work on updating the Civil Code of Ukraine.

It is also necessary to support proposals on the need to amend Article 200 of the Book One by supplementing it with two more objects – trade secrets and discoveries. If they do not have the features provided for the objects of Book Four, it is also necessary to formulate separate rules for distinguishing between the information object and the object of intellectual property rights in additional parts to Article 200 of the Civil Code of Ukraine. It is proposed to discuss the possibility of adding to the list of objects that are enshrined in Article 200 of the Civil Code of Ukraine the same intellectual and creative objects as information systems and networks, automated work and artificial intelligence, as well as content and detail these issues in Book Four as well.
The key issue is the need to preserve the role of the Civil Code of Ukraine as the embodiment of common methodological and doctrinal positions in the field of general principles of intellectual property regulation for all currently known objects of intellectual property rights, the possibility of combining the provisions of other, especially the General Provisions of the Code and special laws, which allows to maintain in the latter branch-related civilistic approach to the content of intellectual property rights, common special remedies and common approaches to the conclusion of agreements on the disposal of intellectual property rights. The same can be said about universal approaches to the status of a security document, which certifies the acquisition of intellectual property rights, as well as the right of prior use, etc.

This study analysed theoretical and practical aspects of civil law regulation of intellectual property relations in the process of updating the Civil Code of Ukraine taking into account the current stage of development of the information society and information relations. The study will be useful for scientists, teachers, graduate students and students of higher law schools, practicing lawyers, as well as anyone interested in the problems of legal regulation of intellectual property relations.

References


