

## VIRTUAL PROPERTY IN THE DIGITAL SPACE: CONCEPT, CONTENT, ESSENCE

ВІРТУАЛЬНА ВЛАСНІСТЬ У ЦИФРОВОМУ СЕРЕДОВИЩІ:  
ПОНЯТТЯ, ЗМІСТ, СУТНІСТЬ

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Law and digital technology, also referred to as IT law, is a functional area of law that has gotten a firm foothold between other legal disciplines over the past decades, both in legal practices and academia. New technological developments such as big data, the Internet of Things, quantum computing, blockchain technology and sophisticated algorithms raise questions regarding the regulation of such technologies, for instance, with regard to which rights and protection citizens have or should have. The regulatory landscape of digital technologies focuses on addressing any undesirable aspects of such technologies and, to a lesser extent, on further facilitating innovation and technology development. However, both in the case of violations of rights and in the case of conflicting rights, there is significant legal uncertainty in how the existing (general) law applies. Also, there has been very little litigation to date on many of these issues. Technology often seems to develop faster than the body of case law.

In article the essence and legal nature of "virtual property" are considered in the conditions of formation of cyberspace. New types of social interaction, available through the Internet, have spawned virtual worlds with a developed economic subsystem. Virtual objects that exist in these worlds, often have a significant economic value and can be obtained for real money, which determines the expediency of their protection through the law. However, it is worth recognizing that the current trend towards dematerialization and virtualization of property, the relations arising in the virtual worlds are increasingly difficult to interpret in a language inherited from Roman law. Over time, the need to rethink traditional perceptions of ownership, its objects and the order of their protection in order to attract virtual objects will inevitably arise.

It seems necessary to draw cyberspace into the scope of the current legal regulation, not contradicting the real and virtual worlds, but realizing that these worlds exist together, and what happens in one can have serious consequences in the second. In any case, the current status quo for virtual objects can not last long. The situation when there is a black market for such objects, and their regulation is carried out by agreements, unilaterally drawn by the rightholders without regard for the interests of users and third parties, is abnormal. Many experts agree that sooner or later the courts, and after them, and lawmakers will be forced to recognize the reality of "virtual" property.

**Key words:** virtual property, virtual relations, cyberspace, gaming space, virtual world.

Право та цифрові технології, які також називають ІТ-правом, є функціональною сферою права, яка за останні десятиліття міцно закріпилася між іншими юридичними дисциплінами, як у юридичній практиці, так і в академічних колах. Нові технологічні розробки, такі як великі дані, Інтернет речей, квантові обчислення, віртуальна власність, технологія блокчейн і складні алгоритми, викликають питання щодо регулювання таких технологій, наприклад щодо того, які права та захист мають або повинні мати громадяни. Регуляторний ландшафт цифрових технологій зосереджений на розгляді будь-яких небажаних аспектів таких технологій і, меншою мірою, на подальшому сприянні інноваціям і розвитку технологій. Проте, як у випадку порушення прав, так і у випадку суперечливих прав, існує значна правова невизначеність щодо того, як застосовується чинний закон. Крім того, на сьогоднішній день було дуже мало судових процесів щодо багатьох із цих питань. Часто здається, що технології розвиваються швидше, ніж судовою практика.

У статті розглянуті сутність та правова природа «віртуальної власності» в умовах формування кіберпростору. Нові види соціальної взаємодії, доступні завдяки мережі Інтернет, породили віртуальні світи, що мають розвинену економічну підсистему. Віртуальні об'єкти, що існують у цих світах, нерідко мають чималу економічну цінність і можуть отримуватися за реальні гроші, що визначає доцільність їх охорони за допомогою права. Проте варто визнати, що за сучасною тенденцією до дематеріалізації та віртуалізації майна відносини, що виникають у віртуальних світах, все складніше інтерпретувати мовою, успадкованою від римського права.

Видається необхідним залучити кіберпростір до сфери поточного правового регулювання, не протиставляючи реальний і віртуальний світи, а розуміючи, що ці світи існують спільно, й те, що відбувається в одному, може мати серйозні наслідки в другому. Багато експертів погоджуються, що рано чи пізно суди, а слідом за ними й законодавці будуть змушені визнати реальність «віртуальної» власності.

**Ключові слова:** віртуальна власність, віртуальні відносини, кіберпростір, ігровий простір, віртуальний світ.

**Formulation of the problem.** Legal problems of virtual property are closely related to the problem of the game space, but have a special content specificity and meaning, which also goes beyond the limits of the game industry itself, but in a different direction. The emergence of persistent game spaces, such as virtual worlds and "non-session" multiplayer online games, has conditioned the economic value of objects that supposedly exist in such virtual spaces. Yes, in multiplayer online games such items can be virtual weapons, armor, mounts, houses, etc. One of the modern models of monetization of multiplayer online games is the "free-to-play" model, under which the player gets free access to the main game functionality, and he can "buy additional functionality" from the developer for real money. Often, this practice does not correspond to the terms of user agreements, but the question of legality and proper legal form of such agreements remains open. At the same time, virtual property, although it has been actualized historically precisely in relation to multiplayer games, can exist in any virtual space that has a feature of permanence and is simulated by computer means, for example, in a social network, provided that in such a space users have it will be possible to exchange

information objects. In general, the technological prerequisites of the systemic legal problem of virtual property are the same as those of the game space problem. The key prerequisites are not technological, but economic in nature and are related to the economic parameters of a certain virtual environment.

**The purpose of the article** is to determine the legal nature and essence of "virtual property", the peculiarities of its legal regulation in the conditions of the formation of cyberspace.

**Presentation of the main research material.** It is necessary to note one infrastructural principle of the organization of the virtual world, which makes virtual property possible as an object of (currently conditional) legal relations. First, such a virtual environment must be characterized by sufficient permanence so that the virtual objects can become objects of social relations that are mediated through the Internet and the client program or other game access format. Secondly, users in such a game should be represented by sufficiently visible virtual representations (avatars) so that it is possible to structure these relations according to subject composition. Thirdly, the organization of the process of interaction, in particular the rules of the game, should assume the possibility of obtaining certain useful properties of the virtual object

in the virtual space. At the same time, in the broad sense of the word, the concept of "virtual property" can similarly be extrapolated to "virtual services", i.e., additionally or alternatively, such a feature as the ability of users to perform mutually beneficial actions in a virtual environment may also be important. In the presence of architectural elements, prerequisites are created for the formation of the economic value of virtual property and (or) virtual services for users. The theoretical significance of this problem is that it is necessary to find an appropriate legal assessment (or create a new one) for a new type of product or service in the economic sense, the value of which is limited to one specific virtual space or several interconnected ones.

Mostly, this systemic problem addresses, first of all, civil legal constructions and can force a new look at stable concepts of property rights, intellectual property rights, services, property, or others that have not yet been reflected in modern discourse. It is possible to model, based on empirical material on the interaction of users with each other and with developers, at least the following directions of development of legal practice in this area. Legal conflicts between users and developers. If the user believes that any of his game-related rights have been violated by the developers, the user may seek legal redress. In some cases and in some jurisdictions (e.g. Germany) a court may deny a claim based on the rule that claims arising from the organization or participation in games are not enforceable, but in other cases the court may recognize it is possible to consider the claim and make a decision, in particular in favor of the player. If the subject of the dispute is virtual property, the resolution of the dispute depends on its legal qualification.

Legal conflicts between users. In multiplayer games and related services (for example, online game distribution platforms that have social network elements), users can enter into relationships with each other over virtual goods. From the position of the developers and in the light of the rules of the game they create and the user agreements they develop, such relations can only fall into the "gray" zone, the developers do not recognize them. However, it cannot be certain that the court will not support the claim of one player against another player, despite what will be written in the user agreement. Again, the main problem, if the dispute is of an "economic" or "property" nature, is to determine the legal nature of virtual property. Legal conflicts between developers and the state regarding taxation. Virtual property is a major source of gaming revenue for a variety of gaming companies, and such companies have different approaches to assessing the tax aspects of their business. In some places, the approaches of game companies and the state may differ precisely in the context of a multi-directional legal assessment of the nature of virtual property.

Today, there is no certainty regarding the legal qualification of virtual property. Among the main approaches to the theoretical understanding of the legal nature of virtual property, based on theoretical premises and existing empirical (mainly legal) practice, which have been summarized [1], are approaches that provide for the non-interference of law enforcement bodies in relations in the game space, the application of the provisions of real property law by analogy, reduction of virtual property to the subject of licensing relations, consideration of virtual property as "other property" in the civil law sense. In addition, the possibility of describing the relationship about virtual property as a service is considered. The term "virtual property" is conditional, even more so, in its content it is not legal, but economic. In fact, it does not reflect the legal nature of virtual objects from the standpoint of property law.

At the same time, applying the norms of property law by analogy is theoretically possible and is one of the ways to solve this systemic problem, although it is questionable from the point of view of civil law. The issue of virtual property was first brought up in relation to multiplayer computer games

and virtual worlds, although it reflects a much wider subject area related to the independent value of certain information objects, their actual and legal turnover. A significant segment of the "virtual property market" is turnover, which sometimes falls into the "gray zone" due to the prohibition of user agreements (that is, at the level of self-regulation), virtual items in games. Virtual weapons, mounts, houses, etc. become the subject of transactions between players. However, in the broader sense of the word within various virtual environments, other informational objects are also actively involved in the circulation – for example, accounts in social networks. The issue of virtual ownership has become a subject of discussion within the gaming industry as well. The main direction of legal practice developed by game companies involves treating the virtual world as the exclusive object of rights (or, in fact, the object of exclusive rights) of the game developer, as much as possible in accordance with the law.

In this context, from the point of view of the industry, the problem of virtual property should also be considered from the angle of the possibility and expediency of providing players with some amount of rights (in the sense of "real" rights) regarding virtual objects. The digital content market is not limited to the provision of electronic copies of traditional objects of copyright and related rights, as well as remote access to them. Lawyers paid undeservedly little attention to another interesting segment. We are talking about various characters of online games and about virtual analogs of real objects, which are implemented in virtual worlds like *Second Life* and are purchased for real money. Many online games and virtual worlds have a developed virtual economy with their own currency, that is, they become a source of income for the rights holders. Some developers of virtual worlds even invite economists who work on creating models of such virtual economies [2].

At the same time, the legal regime of virtual property objects still remains uncertain. For the most part, such issues are regulated by the right holders of the software product within which such objects circulate. Agreements with the end user (End User License Agreement, Terms of Service, Terms of Use) are used as a regulatory tool [3]. The relations that arise in the virtual environment are similar to the relations in the real physical world: the corresponding objects can be purchased for real money, for their identification they use means of individualization that are similar to trademarks, etc. What distinguishes them from classical relations regulated by law is their "virtual" nature.

In view of this, one of the first questions that require a solution is the question of defining the virtual world. Specialists in the field of virtual technologies cite stability and dynamism as the main characteristics of the virtual world [4]. The manifestation of stability is that the virtual world does not cease to exist when users turn off their computers. The manifestation of dynamism is in the constant changes that take place in this world. The recognition of virtual property as property in the legal sense will lead to the possibility of liability of the right holders for making changes to the virtual world, which, in turn, may lead to losses or a decrease in the value of such objects [5]. For example, if the value of a virtual object is inextricably linked to its rarity, introducing rights holders into the game to adjust the balance of the game may be considered a violation of the user's virtual property right. In other words, the creation by the right holder of a certain virtual object is tantamount to recognition of a certain debt by him to the user – the owner of such an object, for which most of the right holders are unlikely to be ready [6]. The question arises to what extent the right should intervene in the processes taking place in the virtual world and protect users from unilateral actions of right holders and (or) other users who encroach on their virtual property objects. On the one hand, it is about relationships that arise in the virtual world, and not in the real world, it is about a game, the essence

of which is to give the user the opportunity to act in a way that he would not act in the real world [7]. On the other hand, we are talking about objects, although virtual, but they have a real value, as well as about relationships that are part of the real life of real people. The law of some countries is already trying to regulate virtual relationships.

Thus, China is developing virtual law as part of a program to build a competitive industry for the sale of virtual property objects [8]. On November 23, 2011, Taiwan's Ministry of Justice issued a Resolution stating that virtual property objects are legally alienable and transferable, and the theft of such objects is punishable as a criminal offense [9]. Similar trends are visible in South Korea, where about 22,000 claims of theft of virtual property objects were processed in just one year [10]. Today, the turnover of virtual objects is practically unregulated in the legislation of most countries [11]. It is usually quite difficult for law enforcement to draw parallels between real property and mathematical algorithms that emulate the appearance and functionality of real-world objects. It must be stated that nowadays relations related to virtual property mostly do not receive legal protection. In the American doctrine, there is an assumption about the extension of the common law norms of ownership to objects of virtual property. This approach is quite logical, because if the goal is to protect such objects from illegal encroachments on them, they must first be given the appropriate status: you cannot steal (sell) something that does not belong to the victim (seller). According to supporters of the outlined position, virtual objects are special intangible objects, they are an intermediate link between objects of intellectual property and classic objects of property rights. They do not belong to the latter, because they exist only on the computer screen, and they do not belong to the former, since sometimes they are not the subject of the user's creative work [12].

As arguments in favor of their position, supporters of the extension of property rights to virtual objects refer to the fact that such objects can be acquired and alienated and have a clearly expressed consumer value [13]. In addition, "certain types of virtual property have many characteristics. Inherent in traditional objects of property rights, and should not be removed from legal protection just because they appear unfamiliar at first glance" [14]. However, American courts have not yet dared to openly recognize the rights to virtual objects as user property, largely because the multiplayer game industry is not interested in clarifying the legal regime of such objects, but this could shake its monopoly on the regulation of relations within virtual spaces and put additional burdens.

Another option to regulate relations regarding virtual objects is the rules of contract law. In the absence of special regulation and the impossibility for one reason or another of using traditional provisions on the right of ownership, the regulatory material provided for in the contract can be used. In fact, they do so in practice today, when the relationship is considered in the context of the license relationship between the right holder (administrator) and the licensee (user). The purchase of virtual objects (equipment of characters, virtual currency or other in-game objects) for real money can be considered as a kind of license payment, in exchange for which the right holder activates certain components of the program and the user gets the opportunity to use its additional functional characteristics. After all, technically, all these virtual objects are a certain program code, that is, a component part of the main program, and do not have a special value separately from it. In this case, it is necessary to qualify the relationship with the transfer of such in-game objects to another user under a sublicense agreement. And such a complication is hardly accepted by supporters of the outlined approach. The recognition of virtual objects as property opens up opportunities to protect the rights of their owners using the tools of unjust enrichment norms.

Thus, the unjustified appropriation of such objects by other persons may well be qualified as unreasonably acquired

property by the emergence of a legal obligation to return it in kind or, if such return is impossible, to reimburse its value. Therefore, theft of someone else's account with a multiplayer game character, theft of virtual currency or objects of virtual infrastructure can lead to the emergence of a legally significant obligation of the person who purchased them to return such an object in kind or to return its value. By analogy, unjustified deprivation of the user of acquired virtual property objects by the right holder can be qualified as unjustified enrichment. At the same time, enrichment is expressed in those funds that the right holder received for such objects. The famous British scientist and game designer Professor R. Bartle, the author of the first significant multiplayer "MUD 1", looked at this problem through the eyes of a developer in the article "Pitfalls of Virtual Property" (Pitfalls of Virtual Property) [15], in which the main he defined the task for himself as "to describe various "pitfalls" related to "real" ownership of virtual property from the point of view of a virtual world developer."

At the same time, R. Bartle focused mainly on critical comments and identified five "pitfalls" of virtual property. Virtual property as a concept. This is the main problem, the key aspect of which is that the game property certainly forms a meaningful concept inside the game, but whether it is so outside the game is an open question. R. Bartle explains this on the example of "Monopoly". If one player pays another real money for the transfer of in-game property ("real estate" on the "street") inside the game, then the situation will look like this: outside the game, certain actions regarding the gameplay are performed for real money, but inside the game such "property" is transferred for free. However, as R. Bartle notes, players tend to assume that either the purchase and sale of virtual items does not differ in economic nature from the purchase and sale of real items, or that the turnover of virtual property is the turnover of peculiar "tokens" that testify to certain in-game property rights (from a formal and legal point of view, such a "token" can also be described as a property right within the limits of this approach, distinguished by R. Bartle). The responsibility of the developer for the virtual world. The developer of the virtual world is responsible for game balance. Supplementing the virtual world with virtual ownership relationships can significantly complicate the maintenance of the virtual world. For example, as a result of the update, users' items may depreciate in value, then the question of damages may arise. The game status of the relationship.

The value of games and their uniqueness in the system of practices common in the modern information society is provided precisely by their game nature. The introduction of virtual property relations governed by real law into virtual worlds can reduce the game value and become the basis for the claim that the virtual world is no longer a game. Dissatisfaction of players. Players don't always see virtual property as an investment or as a way to catch up with players who continue playing after a break from the game. Sometimes the prerequisites for virtual property relations arise as a result of the objective dissatisfaction of players who can no longer reach a high level in the game, because this opportunity is blocked by old and experienced players.

Intellectual Property. This problem is related to legal aspects in the context of the practice of developers to consider relations with players in terms of intellectual property rights. The examples given by R. Bartle appear to be related to the systemic problem of information intermediaries, since the developer of the virtual world is a kind of information intermediary for authorial multiplayer content created by players in a certain game world, which creates legal uncertainty about the scope of rights of players and developers to such content. We consider it expedient to list the main approaches to the legal qualification of virtual property. Status Quo. According to this approach, the law should not interfere in game relations, and the courts should maintain neutrality to the processes that take place in game spaces.

Analogy of property law. A civil-law analogy can be applied to relations related to virtual property and the rules on things and property rights can be extended to virtual objects. In addition, civil law assumes the possibility of extending the property rights regime to similar objects, namely non-cash and undocumented securities. Licensing relationship. According to this approach, it is possible to qualify the studied relationship with the application of existing license and other user agreements offered by development companies. Actually, this approach is a significant part of the modern practice of gaming companies. On the one hand, this approach is quite adequate, because multiplayer games and virtual worlds, as a general rule, are the results of intellectual activity. However, importantly, not all virtual property is easily interpreted from the perspective of intellectual property rights. In particular, some objects of virtual property that have a creative nature can be considered as the result of intellectual activity (for example, uniquely designed, from an artistic point of view, a character's uniform). But there are at least two problems here: first, it is extremely difficult to draw a line between the game in general as a result of intellectual activity and the corresponding right of the player to use it; secondly, not all objects that have value as virtual property contain creative input.

Other property. This approach proposes to consider virtual property as "other property" and to apply to such relations the norms on the relevant types of contracts, torts and unjust enrichment. A combined approach. According to it, on the one hand, the law should not interfere with game relations, but,

on the other hand, relations related to virtual property are not game relations, they are relations between the professional party and the consumer in the form of providing services for the organization of the game process money.

**Summary.** New types of social interaction, available thanks to the Internet, have given rise to virtual worlds with a developed economic subsystem. Virtual objects that exist in these worlds often have considerable economic value and can be obtained for real money, which determines the expediency of their protection with the help of law. However, it is worth admitting that with the modern trend towards dematerialization and virtualization of property, it is increasingly difficult to interpret the relations that arise in virtual worlds in the language inherited from Roman law. Over time, there will inevitably be a need to rethink traditional ideas about ownership, its objects and the order of their protection in order to attract virtual objects. It seems necessary to bring cyberspace into the sphere of current legal regulation, not opposing the real and virtual worlds, but understanding that these worlds exist together, and what happens in one can have serious consequences in the other. In any case, the current status quo regarding virtual objects cannot last long. The situation when there is a black market for such objects, and their regulation is carried out by agreements drawn up unilaterally by rights holders without regard to the interests of users and third parties, is abnormal. Many experts agree that sooner or later the courts, followed by legislators, will be forced to recognize the reality of "virtual" property.

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