



General Provisions of Digital Property Law and How to Categorize Digital Assets

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Received: 26 October 2023 ▪ Revised: 15. December 2023 ▪ Accepted: 31 December 2023

Abstract

This article deals with general provisions of digital property law and categorization of digital assets. Distributed data storage technologies and their applications have created a market for digital assets, forming a new intangible, digital type of property. The formation of digital property law, which is becoming increasingly important, is based on the functional approach of implementing digital assets as property into the law, which necessitates a rethinking and transformation of property law, similar to the transition from exclusively tangible objects of property rights to intangible objects such as intellectual property, as well as from securities and documents of title (bill of lading, bill of exchange) in paper form to fully dematerialized securities, electronic documents of title, and online accounts as property. The transformation of property law for the purposes of digital assets is based on the implementation of new, sui generis property rights and the extension of rules on property rights to objects that were not previously objects of law or were created for obligatory claims, as a result of which objects arising from actual or contractual relations acquire a in rem and quasi-in rem legal regime. Starting with an overview of the concepts of property law of digital assets, the article then discusses the concept of property, and then the concept of digital assets, their nature and classification of the main types of digital assets as property. The formation of digital property law inherent in modern law is a global trend characterized by the gradual recognition of certain types of digital assets as property and the creation of functional equivalents of possession, legal titles and remedies that are inherent in traditional property law, taking into account the intangible nature of digital assets. The author of this research starts with an overview of the general provisions of property law and digital property law, the article then discusses general provisions categorizing of digital assets, and categorizing types of digital assets.

Keywords: digital property law, digital assets, categorizing digital assets.

1. Introduction

Distributed data storage technologies and their applications have created a market for digital assets, forming a new intangible, digital type of property. The formation of digital property law, which is becoming increasingly important, is based on the functional approach of implementing digital assets as property into the law, which necessitates a rethinking and transformation of property law, similar to the transition from exclusively tangible objects of property rights to intangible objects such as intellectual property, as well as from securities and documents of title (bill of lading, bill of exchange) in paper form to fully dematerialized securities, electronic documents of title, and online accounts as property.

The transformation of property law for the purposes of digital assets is based on the implementation of new, *sui generis* property rights and the extension of rules on property rights to objects that were not previously objects of law or were created for obligatory claims, as a result of which objects arising from actual or contractual relations acquire *In Rem* and quasi-*In Rem* legal regime.

Starting with an overview of the general provisions of property law and digital property law (2, 3), the article then discusses general provisions categorizing of digital assets (4), and categorizing types of digital assets (5).

2. General provisions of property law

2.1 *Concept of property law*

Traditionally property law is the area of law that governs the ownership, other *in rem* rights in things.

Property law defines objects of property for the purpose of the law, whether tangible or conceptual,¹ and confers exclusive rights in these objects or “things” that are enforceable against the whole world.²

2.2 *Concept of property*

Three principle elements for legal concept of property

The legal concept of property consists of three principal elements. Those elements are (1) the existence of a thing with particular characteristics; (2) a person’s liberty to put the thing to various uses; and (3) the law conferring on that person a legal right to exclude others from the thing.

Approaches for concept of property

Legal systems take divergent approaches to the concept of property.

The property law of modern countries does not have a unified approach to the concept of property. Depending on whether the scope of property is limited to physical objects, different jurisdictions apply a broad or narrow understanding of property.

Narrow understanding of term “property” means *in rem* rights only over tangibles.

Broad understanding of term “property” provides for *in rem* rights over tangibles and legal rights.

Three broad approaches can be named in the world’s most jurisdictions to the concept of property:

(1) Common law jurisdictions use categories of things in possession (tangible property, physical items) and things in action (intangible property, legal rights);

¹ Thus, the subject-matter of property can in principle be a tangible in the material world, an intangible (e.g., air), or a pure intangible, that is a legal concept, e.g., a debt, intellectual property right. The actual situation depends on the jurisdiction in question.

² Andreas Rahmatian, A Comparison of German Moveable Property Law and English Personal Property Law . Electronic Resource. – [Access Mode]: <https://germanlawarchive.iuscomp.org/?p=340>.

(2) Most civil law jurisdictions have traditionally recognized two categories of property, including personal property – things (physical items) and legal rights;

(3) Some civil law jurisdictions treat as property only a thing (physical items) (i.e., Germany, Japan).

Most civil law jurisdictions treat certain rights as non-physical objects, although a few stipulate that only physical objects qualify as “objects” that can be owned; and

Some civil law jurisdictions, which includes German and Japanese law, have the most fundamental problems, as the recognition of any non-physical object, as an object of property rights needs to circumvent this dogmatic axiom.

2.3 Concept and general attributes of property

Property is at the heart of property law. Clearly, we need to understand what property is and where property in the context of digital assets fits within private law.

The property is used in private law of civil jurisdictions means only tangible items (i.e., German Law) or tangible and intangible items such as a property rights or any proprietary rights (i.e., Austria, Ukraine, Scotland).

In common law jurisdictions [personal] property consists of tangibles’ or ‘things in possession” and intangibles or “things in action.”

[Personal] property refers to interests in relation to any other thing.³

“Property” does not refer to a thing but to a relationship between a person and a thing.

"Property" does not refer to a thing; it is a description of a legal relationship with a thing. It refers to a degree of power that is recognized in law as power permissibly exercised over the thing (High Court of Australia in *Yanner v Eaton*).⁴

The category of things in possession is currently limited to physical things. Things in possession are things which are “tangible, moveable, visible and of which possession can be taken.” An example of this is a bag of gold: possession of a bag of gold gives its possessor a property right which is enforceable against the whole world.

Things in action are, in general, things in relation to which rights “are asserted by taking legal action or proceedings.” The classic example of a thing in action is a debt claim. The category of things in action is sometimes given a much broader meaning as a residual class of personal property. In other words, the broad use of the term thing in action captures any personal property that is not a thing in possession. Common examples of “things in action” are debts, rights to sue for breach of contract, and shares in a company.

A key question is, therefore: “What features or attributes must a thing have before it can be the legal object of property rights?”

Under the UK case law: Property must be definable, identifiable, capable of assumption by third party, having some degree of permanence or stability (in *National Provincial Bank v Ainsworth*).

³ M. Bridge, L. Gullifer, K. Low, G. McMeel, *The Law of Personal Property* (3rd Ed. 2021) para 1-009.

⁴ 201 CLR, referring to K. Gray, “Property in Thin Air” (1991) 50 *Cambridge Law Journal*, 251.

Another case: A statutory entitlement that is transferable and has value is certainly “property” (In *Celtic Extraction Ltd*, a case involving waste management licenses).

Civil law jurisdictions treat property in the legal sense as a set of subjective rights represented by a holder, and the objects to which these subjective rights refer can be quantified in monetary values.

For example, in the Law of Ukraine, property as a special object is considered a separate thing, a set of things, as well as property rights and obligations (Art. 190 of the Civil Code of Ukraine).

Therefore, the general attributes of property are: (1) the subsistence in them of a right control, enjoyment, or use, *lato sensu* – defined as the ownership, (2) legal title controllable by a certain person, (3) transferrable from one person to another.

Conclusions that could be drawn from this issue

Property are physical things, i.e., objects of the real world, and legal things, i.e., intangible objects (securities, digital assets, etc.) that are recognized by law or court as a thing or which are subject to the legal regime of a thing, since such property objects have property value, are capable to be controllable and transferrable.

2.4 Concept of property rights

Property rights are treated as rights against third parties.

Property rights are property rights (ownership and limited property rights in civil jurisdictions, legal titles in common law jurisdictions) that are valid against each person, that is, they are enforceable against the whole world.

Property rights are characterized by a closed list of property rights.

Most of jurisdictions recognize only certain types of property rights (*numerus clausus* of property rights).

Some jurisdictions provide for the principle of a relatively open list of property rights, according to which property rights are those provided for by law as property rights, as well as other property rights recognized by the court as property rights by their legal nature (for example, Spain).

Noteworthy inherent in English Law flexibility in recognizing of a new type of property and absolute proprietary rights due the relative openness of English law to recognizing property rights in a variety incorporeal thing.

Conclusions that could be drawn from this issue

Most of jurisdictions recognize only certain types of property rights (*numerus clausus* of property rights).

For the purposes of more flexibility of law, it is advisable to implement into the Law of Ukraine relatively open list of property and property rights by giving courts the right to recognize new types of property and property rights or other absolute proprietary rights not provided for by law in case of compliance with the key attributes of the property, property rights and other absolute proprietary rights.

Property rights are proprietary rights (ownership and limited property rights in civil jurisdictions, legal titles in common law jurisdictions) that are valid against each person.⁵

Traditional Property Law may apply to digital assets, despite their intangible nature, if a law or court decision recognizes digital assets as a thing or if they are subject to the provisions of the law on things. Thus, the law of many countries of civil and common law is characterized by a tendency to extend to digital assets or their specific types the provisions on personal (movable) property, taking into account the intangible nature of digital assets. At the same time, the law establishes the specifics of legal titles to digital assets.

Accordingly, digital property law is a branch of law that regulates absolute property rights in digital assets, their transfer, grounds for origin and termination, security, protection and inheritance under national and international private law.

3. General provisions of digital property law

3.1 *Concept and system of digital property law*

It is necessary to distinguish the concept “digital property law” and concept “digital property rights”), or digital property law in subjective and objective meanings.

Digital property law is the areas of private law that governs the various forms property rights, legal titles in digital assets.

Digital property rights are the entailments to access, control, enjoyment or use digital assets that operate against each person or only against a party to a contract or any other debtor, depending on whether they are legally characterized by rights in rem, obligations or other rights.⁶

Digital Property Law includes private law institutions of digital property, digital possession/control, transfer, legal titles (ownership, access, quasi – in rem rights), property injunction, security, remedies, inheritance, digital assets with a foreign element.

3.2 *Concept and legal titles on digital assets*

Digital assets are heterogeneous intangible benefits that exist electronically and represent value or contractual rights. Different types of digital assets are legally characterized by rights in rem, obligations or other nature, which determines the nature of digital property rights.

Narrow meaning of digital assets equates to equivalent of cryptoassets: a cryptographically secured digital representation of value or contractual rights that uses some type of DLT and can be transferred, stored or traded electronically.

Broad understanding of digital assets means any record or representation of value that fulfils the following criteria:

- (i) it is exclusively stored, displayed and administered electronically, on or through a virtual platform or database, including where it is a record or representation of a real-world, tradeable asset, and whether or not the digital asset itself is held directly or through an account with an intermediary;

⁵ Christian von Bahr, *Gemeineuropäisches Sachenrecht Band 1: Grundlagen, Gegenstände sachenrechtlichen Rechtsschutzes, Arten und Erscheinungsformen subjektiver Sachenrechte*. Gebundenes Buch. – 2015. – Verlag C. H. Beck. – (s. 860). – S. 5.

⁶ Rhys Bollen, *The Legal Status of Online Currencies Are Bitcoins the Future?* [2016] Access: <https://ru.scribd.com/document/536348131/SSRN-id2285247>.

(ii) it is capable of being subject to a right of control, enjoyment or use, regardless of whether such rights are legally characterised as being of a property, obligational or other nature; and

(iii) it is capable of being transferred from one party to another, including by way of voluntary disposition.

Access approach provides certain persons with access to the account's content, but not to the account *per se*.

Legal title approach provides certain persons with access content and the account *per se*.

Conclusions that could be drawn from this issue

The question remains as to ownership v access: ownership on digital assets only which are legal things, right of access on digital assets which are legal claims?

While the acknowledgement of digital assets as a form of property might make sense in certain jurisdictions that have a more functional understanding of the concept of property, i. e. things and legal rights, it might be in stark contrast to the current understanding and qualification of crypto assets as “crypto property” in other jurisdictions that only recognize physical objects as being subject to property rights.

Given the differences in different jurisdictions, the legal traditions of jurisdictions should be taken into account when recognizing virtual assets as property and legal titles to them.

3.3 Ownership and possession

Full participation in the turnover of digital assets necessitates their recognition as objects of ownership and possession or their legal equivalent.

Generally, ownership is treated as the most comprehensive right a person over a thing that are enforceable against the whole world. Possession is usually understood as the actual holding of a thing as one's own. At the same time, the object of possession is usually a tangible thing. Therefore, the existing concept of possession do not meet the requirements for “possession” of digital assets.

Legal statement on cryptoassets and smart contracts of the UK Jurisdiction Taskforce (UKJT)⁷ concludes that “a cryptoasset is not a thing in possession because it not tangible and so cannot be possessed.”⁸

In this regard, some authors note, that “While it is clear that the market expects the law to treat digital assets as objects of property rights – and it is common to speak about digital assets as objects of ownership and possession – it is not always straightforward that these concepts apply to digital assets.”⁹

⁷ Legal statement on cryptoassets and smart contracts. UK Jurisdiction Taskforce. The LawTech Delivery Panel, n. 67. November 2019. URL: https://www.blockchain4europe.eu/wp-content/uploads/2021/05/6.6056_JO_Cryptocurrencies_Statement_FINAL_WEB_111119-1.pdf.

⁸ Of course, the keys to a cryptoasset can be stored on a physical medium, which can be possessed, such as a USB drive or even a piece of paper. But that does not mean that the cryptoasset itself can be possessed.

⁹ Jason G. Allen, Michel Rauchs, Apolline Blandin, Keith Bear, Legal and regulatory considerations for digital assets. University of Cambridge. 2020. Access: <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-legal-regulatory-considerations-report.pdf>.

Possession is actual dominance over a thing, which implies having physical control over that thing. The functional equivalent of the actual domination of a person over a digital asset confirms possession of the attributes of practical control over such asset (i.e., private key of the crypto-asset). A person who holds in his own interest such an instrument of practical control has control over a digital asset, which is functionally physical control over the thing that person owns.

However, UKJT believes that “It is not enough that the private key gives practical control. Possession is concerned with the physical control of tangible objects; practical control is a broader concept, capable of extending to intangible assets and to things which the law would not regard as property at all.”¹⁰

One can agree with such an approach, if we proceed from the understanding of practical control, which is not created only by a tool of such control (for example, the private key of a crypto-asset). However, functionally physical control occurs in the event of practical control over digital assets that are recognized as property.

In this regard, two ways of development of the doctrine of control over digital assets could be assumed: (1) possession of digital assets, which involves practical control over appropriate digital assets which law treats as a property, or (2) control over digital assets that are property as a functional equivalent of possession, if domestic law does not recognize possession of digital assets, independent from possession.

In conclusion, it is possible to foresee the possible implementation of two main models of control over digital assets. First, the so-called digital possession or second, control of a digital asset as a legal equivalent of traditional possession. For the purpose of digital possession implementation, the law should provide for an expanded concept of possession by recognizing possession as both actual detention of a tangible thing and control over digital assets or by extending the provisions of the Laws on possession to “digital possession” (control) of digital assets. Other possible option for implementing “possession” of a digital assets is to implement into law (the Civil Code, judiciary practice) provisions on control of digital assets.

3.4 Approaches to digital property law

State-based approach: is it a way to breach crypto space?

This approach is based on the idea of sovereignty: the legal system has the inherent de jure authority to regulate cyberspace and therefore has the legitimacy to regulate DLT and blockchain, which is true for any other “sphere,” physical or not. According to this approach, the legal principles on which the legal system is based are applicable to blockchain and DLT. In this case, the legal qualification of the nature of virtual assets is to recognize them as a form of property¹¹, that is recognized as intangible property, property digital artifact,¹² digital things

¹⁰ Your Response Ltd v Data Team Business Media Ltd [2014] EWCA Civ 281 (n 26). URL: <https://vlex.co.uk/vid/your-response-ltd-v-792620845>.

¹¹ Fox, David, Cryptocurrencies in the Common Law of Property (August 16, 2018). <http://dx.doi.org/10.2139/ssrn.3232501>.

¹² Rhys Bollen, “The Legal Status of Online Currencies Are Bitcoins the Future?” [2016]. Access: <https://ru.scribd.com/document/536348131/SSRN-id2285247>.

subject to the property law regime,¹³ or they have the nature of obligatory rights¹⁴. Accordingly, in the future, we can expect the formation of virtual property rights as (1) quasi-property rights, or (2) obligatory rights, or (3) integrative (mixed) rights, or (4) sui generis, a new property right. In this regard, Finck Michèle concludes that “this approach ...is not useful for classifying the cryptos that have been classified as protocol cryptoassets, as in the case of decentralized applications or dapp, such as decentralized autonomous organizations (DAO).”¹⁵

This author’s conclusion has important role, as it draws attention to the existence of a broader understanding of cryptos that is not covered by the traditional concept of civil rights object and leaves the category of “protocol cryptoassets” outside the normatively recognized classification of cryptoassets. Such broader understanding of cryptoassets might be useful in the context of constant emergence of new types of cryptoassets and related legal categories, despite the absence in modern law of an independent legal status of “protocol cryptoassets” as a separate type of cryptoasset or related to it legal category. In fact, there is a certain probability that in the future “protocol cryptoassets” may be recognized as a sui generis cryptoasset or a separate legal category, combining elements of the object and subject of civil rights.

Property cyberlaw: As a new paradigm

Cyberlaw is a new paradigm, based on the idea that cryptolaw is outside of the law: it is a cloud of legal norms, processes, institutions, and vocabularies for governing inter-crypto, intra-crypto, and all other legal relations concerning crypto instruments, institutions, and markets.¹⁶ The cryptolaw method of governance varies according to the kind of relation that exists between the law and code.

Self-executing and regulatory organizations, Lex Cryptographica: Are they truly promoting crypto space autonomy?

On the opposite side of the spectrum, another approach, which can be defined as cyber-separatism, extends to all kinds of cryptoassets and indicates that no regulation should be imposed and that DLT should remain self-driven¹⁷. Otherwise, regulations governed by the rule of law may be replaced by a system of algorithmic governance operated exclusively through the rule of code that both defines and enforces a *Lex Cryptographica*.

In any case, any solution must acknowledge that economic decisions and economic acts implemented through informatic systems such as blockchains are territorially neutral and are formed only virtually by a peer-to-peer network.

¹³ See: Nekt K. G. Virtual Assets as a Kind of Digital Things // Journal of Civil Law. August 2022. DOI: 10.32837/chc.voi45.466. Access: <http://chascyvil.onua.edu.ua/index.php/chc/article/view/466>; Nekt K. Social Media Account as an Object of Virtual Property. 2020. Access: <https://journals.muni.cz/mujlt/article/download/12298/11651/28166>.

¹⁴ Cvetkova I. CRYPTOCURRENCIES LEGAL REGULATION. *BRICS Law Journal*, 2018; 5(2): 128-153. <https://doi.org/10.21684/2412-2343-2018-5-2-128-153>.

¹⁵ Finck Michèle, ‘Blockchain Technology’, *Blockchain Regulation and Governance in Europe* (Cambridge University Press 2018), 22 et seq. Access: https://assets.cambridge.org/97811084/74757/frontmatter/9781108474757_frontmatter.pdf.

¹⁶ CleanApp, ‘Defining Cryptolaw’ (*Medium*, 28 September 2018) <https://medium.com/cryptolawreview/cryptolaw-9410cf7a8fd4>.

¹⁷ Samuel Elliott, ‘Bitcoin: The First Self-Regulating Currency?’ (2018) 3 *LSE Law Review* 57 Access: <https://storage.googleapis.com/jnl-lse-j-lselr-files/journals/1/articles/23/submission/proof/23-1-45-1-10-20191015.pdf>.

Conclusion that could be drawn from this issue

Law towards a three-layered digital property law: State-based, supranational (Digital Lex Mercatoria) and intra- & inter-crypto (Law (Cyberlaw)).

Failure to take into account spontaneous transnationality inherent to DLT will create hurdles in the development of technologies and capital outflow from over-regulated jurisdictions.

4. General provisions categorizing of digital assets

4.1 *Approaches to categorizing digital assets*

Given the differences in the law of national jurisdictions, two main approaches to categorizing virtual assets as property are emerging: holistic and object-based.

The holistic approach provides for the recognition of digital assets, including cryptoassets and digital content:

- (1) a kind of things/tangibles (Moldova);¹⁸
- (2) legal equivalent to a things/tangibles by extending the provisions on things to virtual assets (Ukraine);¹⁹
- (3) type of proprietary rights (Serbia).²⁰

The object-based approach provides for separate legal regimes for different types of digital assets as property. In particular, cryptoassets are recognized as a movable property for secured cryptoassets (Germany),²¹ “movable and immovable property of any kind” (Malta)²² or sui generis, the third type of property (UK). Other digital assets (digital files, e-mail, domain names, carbon credits or European carbon dioxide emission permits) are usually recognized as property rights. Digital commercial papers (warehouse receipts, bills of lading, delivery orders) and in-game items are recognized as property rights or are not recognized as independent objects of civil rights depending on the laws of the relevant jurisdiction.

4.2 *Concept and test for categorizing digital assets*

The three-layered test for categorization a digital asset involves determining whether a certain digital asset meets the general concept of property, the concept of a certain type of digital property and for such the purpose of special interests such as the subject of legal title (ownership, access rights), control, security, remedies, bankruptcy.

¹⁸ Article 477 of the Civil Code of the Republic of Moldova : Law No. 133 of 15.11.2018: enters into force on 01.03.2019 - Chisinau: Farmec-Lux, 2019 (F.E.-P. “Tipografia Centrala”) - 640 p. P. 130-131.

¹⁹ Law of Ukraine dated 10.08.2023 N 3320-IX On Amendments to the Civil Code of Ukraine to Expand the Range of Civil Rights Objects. Access: <https://zakon.rada.gov.ua/laws/show/3320-IX#Text>.

²⁰ Mirković Predrag, Digital Assets – A Legal Approach to the Regulation of the New Property Law Institute. Special Edition / 2023. Pages: 17–31. <http://doi.org/10.5937/ptp2300017M>.

²¹ Fillmann A. German Law Aspects of Crypto Assets. The National Law Review. April 2, 2020. URL: <https://www.natlawreview.com/article/german-law-aspects-crypto-assets#:~:text=Under%20German%20civil%20law%2C%20it,of%20sections%2090%3%20et%20subq>.

²² Malta Virtual Financial Assets Act 2018 (VFAA), pt I art. 2 (2). Electronic Resource. – [Access Mode]: <https://legislation.mt/eli/cap/590/eng/pdf>.

5. Categorizing types of digital assets

5.1 *Categorizing cryptoassets. Heterogeneity of cryptoassets*

Different types of cryptoassets do not have equivalent content. Exchange tokens closely linked do not incorporate any right of an obligatory character and closely linked to in rem rights, while utility tokens have a link to the holder's right to access goods or services linked to obligatory claims. Security tokens are equivalent of security closely linked to in rem or quasi in rem rights. NFT is separate cryptoassets structured to represent digital artworks, music works, collectables, baseball basketball cards, photo albums, etc. NT is closely linked to in rem rights. The ownership of NFT asset should depend on the structure and the underlying asset. For example, after a transfer of an NFT representing a digital artwork to the purchaser, the purchaser as the NFT owner has access to the underlying asset, but this does not mean that the purchaser automatically obtains ownership of the content of the underlying digital artwork. Depending on the terms and conditions, the NFT purchaser might only be entitled to view the digital artwork and does not acquire its ownership in any form (e.g., any electronic files of the artwork).²³

There are a few approaches for categorizing of cryptoassets which provide for they are a form of property²⁴, are private intangible property, are a valuable digital artefact,²⁵ are digital things on which extend in rem regime,²⁶ or have the nature of obligation rights²⁷.

Taking into account the differences in the law of national jurisdictions, six approaches to the categorization of cryptoassets are formed, which are: (1) a kind of thing (Moldova), (2) equated to a thing by extending the provisions on things (tangibles) to digital assets (Ukraine), (3) equated to movable and immovable things of any kind (Malta)²⁸ ("movable and immovable property of any kind"),²⁹ (4) digital or property rights (Russia, Serbia),³⁰ (5) sui generis property (United Kingdom),³¹ (6) crypto securities are equated to movable things, other crypto assets are recognized as property rights (Germany).³²

²³ Chang R., Hsiung E. Taiwan Blockchain. URL: <https://www.legal500.com/guides/vhapter/taiwan-blockchain/?export-pdf>.

²⁴ Fox, David, Cryptocurrencies in the Common Law of Property (August 16, 2018). <http://dx.doi.org/10.2139/ssrn.3232501>.

²⁵ Rhys Bollen, 'The Legal Status of Online Currencies Are Bitcoins the Future?' [2016] Access: <https://ru.scribd.com/document/536348131/SSRN-id2285247>.

²⁶ See: Nekt K. G. Virtual Assets as a Kind of Digital Things // Journal of Civil Law. August 2022. DOI: 10.32837/chc.v0i45.466. Access: <http://chascyvil.onua.edu.ua/index.php/chc/article/view/466>; Nekt K. Social Media Account as an Object of Virtual Property. 2020. Access: <https://journals.muni.cz/mujlt/article/download/12298/11651/28166>.

²⁷ Cvetkova I. CRYPTOCURRENCIES LEGAL REGULATION. *BRICS Law Journal*. 2018; 5(2): 128-153. <https://doi.org/10.21684/2412-2343-2018-5-2-128-153>.

²⁸ Malta Virtual Financial Assets Act 2018 (VFAA), pt I art. 2 (2). Electronic Resource. – [Access Mode]: <https://legislation.mt/eli/cap/590/eng/pdf>.

²⁹ Malta Virtual Financial Assets Act 2018 (VFAA) , pt I art. 2 (2). Electronic Resource. – [Access Mode]: <https://legislation.mt/eli/cap/590/eng/pdf>.

³⁰ Đ. ĐURIĆ, V. JOVANOVIĆ, NEW REGULATION OF DIGITAL ASSETS FOR FUTURE BUSINESS – CASE OF SERBIA. *AGORA International Journal of Juridical Sciences*, No. 1 (2023), pp. 7-16. <http://univagora.ro/jour/index.php/aijjs>.

³¹ Fox, David, Cryptocurrencies in the Common Law of Property (August 16, 2018). <http://dx.doi.org/10.2139/ssrn.3232501>.

³² German Law Aspects of Crypto Assets. *The National Law Review*, September 12, 2023. Volume XIII, Number 255. Access: <https://www.natlawreview.com/article/german-law-aspects-crypto-assets>.

However, a global trend is emerging to recognize cryptoassets as property.

In particular, in the Law of England and Wales crypto-tokens are already capable of qualifying as property, though the precise boundaries are unclear. We have no doubt that the English courts already recognise crypto-tokens (broadly, as described in Appendix 4 of the CP) as objects of property under English law. There will inevitably be boundary issues, and the property status of specific crypto-tokens will depend upon the particular features of the relevant system. Some of the Law Commission's proposals for statutory intervention (e.g., an innocent acquirer rule) could imply a need for a statutory definition of crypto-tokens.³³

A similar tendency to recognize cryptoassets as property occurs in many other legal jurisdictions, despite the peculiarities of national traditions regarding the concept of property and the model of legal regulation of cryptoassets.

Conclusions that could be drawn from this issue

There is an obvious conflict between various legal approaches conditioned by legal traditions and readiness for private law reforms.

5.2 Categorizing digital commercial papers

The digital commercial paper (bill of exchange, promissory note, etc.) represents the goods, which exists as a record capable to be subject of access, control, enjoy or use, capable to be controllable and transferrable from one person to another by digital negotiation.

Conclusions that could be drawn from this issue

This indicated compliance of this digital assets all core criteria of property.

5.3 Categorizing digital files

Digital file is a digital asset capable to be subject to control, rights of store the file on a hard drive, physical deliver the hard drive to another person and tell her the password, able to be transferred, regardless that they would not be normally disposed, since it could be subject of property-like (quasi-property) claim and consequently would benefit from or involve the need for the in rem legal regime.

Conclusions that could be drawn from this issue

Strong case for extending property rights to digital files.

5.4 Categorizing domain names

Domain name exists as a digital account password-protected by act of registration of domain name's holder which is capable to be subject to control, rights to access, use and dispose, has monetary value, could be controllable by certain person and able to be transferred from one person to another.

³³ Michael Voisin, Richard Hay, Sophia Le Vesconte, Sam Quicke, Henry Wells, Digital assets and English private law: the highlights of our response to the Law Commission's consultation. Access: <https://www.linklaters.com/en/insights/blogs/fintechlinks/2022/october/digital-assets-and-english-private-law>.

Conclusions that could be drawn from this issue

It means that domain name meets all criteria required for property regardless of at which extent such property rights will have big or little character of obligation between digital services provider and holder (owner) of this domain name.

5.5 Categorizing emails

Emails exist as a digital record which functions as a way to identify entity of its holder and a tool to send and to receive some digital information, which capable to be subject to control, rights to access, use and dispose, has monetary value, could be controllable by certain person and able to be transferred from one person to another.

Conclusion that could be drawn from this issue

It means that email meets all criteria for property and could be a digital asset and be recognized as property regardless of at which extent such property rights will have big or little character of obligation between digital services provider and holder of this email.

5.6 Categorizing in-game digital assets

In-game digital assets are type of digital assets, which are used to enrich a player's experience of a game, or to enable them to perform better within that game. Many in-game digital assets have marketable value. Examples of in-game digital assets include "skins" (avatar outfits), collectibles, weapons, and even virtual land and buildings.³⁴

There are usually two main possible views as to what the thing that constitutes an in-game digital asset is:

- (1) Some form of reified, or independently existing, object which exists in a digital world;³⁵
- (2) A mixture of information located on servers and computers, software, intellectual property rights and contractual rights.³⁶

We agree with authors, which argue that "a players (as a landowners) actually "owned" objects of property in the game,"³⁷ and "in-game digital assets acquire some proprietary nature and limitations of use of a thing provided by the terms of the license are not incompatible with ownership of a thing, especially considering the fact that provider's terms of service provided for a player's ability to control the land which they owned in the game. They were able to exclude others, to subdivide it, or sell the ingame land in question."³⁸

³⁴ The Law Commission of England and Wales. Para 7.33 of Digital assets Consultation paper. No 256. 28 July 2022. Available at: <https://www.lawcom.gov.uk/project/digital-assets/>.

³⁵ See eg H Y-F Lim, "Virtual world, virtual land but real property" (2010) *Singapore Journal of Legal Studies* 304, and J, Fairfield, "Virtual property" (2005) 85 *Boston University Law Review* 1047.

³⁶ See M. Bridge, G. McMeel, L. Gullifer and K. Low, *The Law of Personal Property* (3rd ed 2021) paras 8-059 to 8-062. 600 487 F. Supp. 2d 593 (United States District Court for the Eastern District of Pennsylvania).

³⁷ H Y-F Lim, "Virtual world, virtual land but real property" (2010) *Singapore Journal of Legal Studies* 304, 312, referring to Guardian Unlimited: Gameblog, "Second Life and the Virtual Property Boom" (14 June 2005).

³⁸ Above, 320 to 321.

At the same time, the opposite position taken by the UK Commission is not without logic, that “the in-game digital asset exists as the result of a combination of infrastructure, intellectual property, and servers which enable a network of players to play together in the same ecosystem. However, all of these things are themselves the objects of property rights held by, among others, the game developer, or of some platform that supplies its services to players.”³⁹

Conclusion

If statutory law or court practice does not recognize in-game digital assets as an object of property rights held by, among others, the game developer or some platform that supplies its services to players, a players (as a landowners, etc.) could be treated as owner objects of property in the game, as in-game digital assets acquire some proprietary nature, taking into account that limitations of use of a thing provided by the terms of the license are not incompatible with ownership of a thing, especially considering the fact that provider’s terms of service provide for a player’s ability to control the land which they own in the game, and they are able to exclude others, to subdivide it, or sell the in-game land in question.

5.7 Categorizing carbon credits or european allowances to emit CO2 (‘EUAs’)

EUAs’ exist as an electronic record and title over allowances, which have no material form, capable to rights of enjoy and use, be controllable, transferrable, each allowance has a unique code that allows for identification and contributes to the permanence and stability of the allowance.

Conclusions that could be drawn from this issue

From the perspective of English and Ukrainian laws, the proprietary status of the carbon allowances does not appear especially controversial and is enough likely.

8. Concluding remarks

The formation of digital property law inherent in modern law is a global trend characterized by the gradual recognition of certain types of digital assets as property and the creation of functional equivalents of possession, legal titles and remedies that are inherent in traditional property law, taking into account the intangible nature of digital assets.

Most types of digital assets potentially capable to be a property as they meet key criteria of property, namely they exist as a digital account or representation, capable to be subject to control, rights to access, enjoy, use, have monetary value, capable to be controllable by certain person and able to be transferred from one person to another. If so, it means that mentioned digital assets could be treated as a property.

The question remains whether all digital assets are property? For example, whether the deceased’s email addresses containing confidential information about the deceased or third parties are property? The legal status of In-game items is relevant.

³⁹ The Law Commission of England and Wales. Para 7.41 of Digital assets Consultation paper. No 256. 28 July 2022. Available at: <https://www.lawcom.gov.uk/project/digital-assets/>.

Acknowledgements

This research did not receive any specific grant from funding agencies in the public commercial, or not-for-profit sectors.

The author declares no competing interests.

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