ANALYSIS OF THE NOTION OF DIGITAL ASSETS IN THE CONTEXT OF FRAGMENTED TERMINOLOGY

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Abstract: *The subject of this article is the terminology concerning all that is digital and intangible. In the past decades, many similar notions describing the essentially same phenomenon appeared – virtual property, digital content, digital assets, or data. However, most of these terms are not codified legal notions and as a result, their understanding in the literature or soft law instruments differs. Various bodies, including UNIDROIT, ELI, and the UK Law Commission, have recently addressed the topic of digital assets and private law and provided their definitions of the notion. Moreover, with the new EU digital legal framework, we may see attempts to codify notions such as data, digital content, or cryptoassets. The aim of this paper is to analyse the understanding of the notion of digital assets, put it into a broader context and identify how this notion overlaps with others. The main argument is that the difference between the notions is unclear which puts the policymakers into a tough position in which it is difficult to avoid overlapping regulation.*

Keywords: *digital assets, data, virtual property, digital content, cryptoassets*

INTRODUCTION

UNIDROIT and the UK Law Commission recently published papers focusing on digital assets and their legal regime. Interestingly, while UNIDROIT narrowed down what they see as digital assets, the UK Law Commission decided to keep the category open and as broad as possible.[1] Such different approach is possibly a result of using non-legal terminology in legal texts. And digital assets are only one of the examples. Nowadays, we may see many different notions being used across the legal literature such as virtual property, virtual assets, digital assets, res digitales, data, cryptoassets, or smart property. Furthermore, we may come across different notions being used in specific legal instruments like digital content. This opens up a question of whether all those notions are not essentially the same. This leads to a consideration of whether the fragmented terminology is not confusing for the legislators and if the existence of the umbrella term of digital assets is truly helpful to the law and legal literature. Moreover, with the new EU digital legal framework, notions such as cryptoassets and data, which are similar to digital assets, recently became codified. This may again bring some interpretational challenges as the legal definitions may depart from what the literature previously understood under these terms.

The aim of this article is to analyse the notion of digital assets and put it into a context with other similar notions such as data, virtual property or digital content. At the same time, the paper focuses on the risks of such fragmented terminology. The first part of this

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[1] In: *UNIDROIT* [online] April 2023 [2023-07-20]. Available at: <https://www.unidroit.org/wp-content/uploads/2023/04/C.D.-102-6-Principles-on-Digital-Assets-and-Private-Law.pdf> and *UK LAW COMMISSION* [online] 28.7. 2022 [2023-07-20]. Available at: <https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jsxou24uy7q/uploads/2022/07/Digital-Assets-Consultation-Paper-Law-Commission-1.pdf>. 377–395.

article deals with similar notions and analyses what these notions have in common and how they differ. The second part then specifically focuses on the notion of digital assets, its origin in legal literature and legal instruments, and compares this notion to the other notions analysed in the first part. The goal of this paper is not, however, to (re)define the examined notions.

The clarification of the terminology is not entirely without merit. Digital assets is a notion appearing in connection with multiple legal fields such as financial law, civil law or intellectual property law. In all these legal fields, the questions such as what the legal nature of digital assets is or whether there should be a new regulation appear. But in the end, digital assets are usually not a codified notion (as opposed to, e.g., digital content). This means that the first step in order to categorize them under any legal field is to have a clear understanding of what it is. What I am going to argue is that the understanding of what each notion means and where they overlap is crucial for both the regulatory and conceptual debate that often surrounds the topic. Moreover, the clarification of the terminology may help the legislators in order to avoid overlapping regulatory proposals. As of now, we may see a lot of calls for the regulation of either digital assets, digital inheritance, data or cryptoassets. This fragmentation leaves the legislators in a tough position in which it is needed to first decipher what all these notions mean and how they are related to each other while avoiding unnecessary overlapping regulation.

I. VIRTUAL PROPERTY – THE ORIGINAL NOTION?

Virtual property is a notion that emerged around the beginning of the millennium. Two definitions of virtual property serve as essential primers for understanding this concept - one coined by Joshua Fairfield, and one used by Hunter and Lastowka.

Fairfield defined the term as *"rivalrous, persistent, and interconnected code that mimics real world characteristics"*.[2] The definition in itself does not provide many clues as to the nature of virtual property, except that is it some sort of code to which Fairfield attaches common law attributes. One must therefore look further into the descriptions in the article in which Fairfield explains that he means a code that is *"designed to act more like land or chattel than ideas."*[3] As examples, Fairfield lists URLs, email accounts, bank accounts, domain names or chat rooms.[4] The idea of multiple "codes" existing at the same time, with some acting as a real world property, was itself subject to scholarly criticism, namely that only one code exists, emerging as different virtual objects.[5] Furthermore, since the definition does not exactly reflect the technical reality, the examples provided by Fairfield rather appear to imply what he means by virtual property. Fairfield presumably means all digital intangibles (such as those that he listed) which may, under some circumstances, allow users the same interactions that are typical for tangible objects. Finally, Fairfield's definition was heavily based on the common law attributes of property. Accordingly, his defini-

[2] FAIRFIELD, J. Virtual Property. *Boston University Law Review*. 2005, Vol. 85, No. 4, p. 1053.
[3] Ibid., p. 1049.
[4] Ibid., p. 1055–58.
[5] PAŁKA, P. *Virtual Property – Towards a General Theory*. Florence: European University Institute, 2017, p. 95.

tion may not be applicable to other jurisdictions whose requirements for something to be property may significantly differ, even in an entirely theoretical sense.

Yet, attaching the common law attributes of property to the definition is exactly what many other authors, such as Blazer[6] or Nekit[7], extracted from the definition. So we arrive at the conclusion that for at least some authors, virtual property is in fact tied to the attributes of rivalrousness, persistency and interconnectivity.

Lastowka and Hunter proposed another definition of virtual property. According to their article, virtual property is *"entries in a database resident on a server that permits a participant's computer monitor to display images already present within the software."*[8]

Fairfield and Lastowka and Hunter were not the only ones who considered virtual property to be a code. Similarly, Charles Blazer defined virtual property as a *"Persistent computer code stored on a remote resource system, where one or more persons are granted certain powers to control the computer code, to the exclusion of all other people*".[9] Looking into what he saw behind such code, Blazer notes that virtual property may take the form of *"an email address, a website, a bidding agent, a video game character, or any number of other intangible, digital commodities*".[10]

Erlank notes that the property existing in virtual worlds is only a narrow part of virtual property and the wide understanding includes another virtual objects.[11] Similarly to Erlank, Mu also describes virtual property as a notion whose meaning may vary based on the context of a specific research.[12] Consequently, Mu identifies virtual property in a stricter sense when the meaning is tied to videogames and in a broader sense where it includes URLs and internet accounts.[13]

The problems inherent with the notion of virtual property are not only that its definitions were based on the idea of a "code", but more importantly that they apparently never really stuck. Even Joshua Fairfield, who is more or less considered to be its author, never really used this notion. Furthermore, in his later works, he continued to devise additional notions such as bitproperty[14], digital property[15] or smart property.[16] And even at the time when the debate on property rights in virtual worlds peaked, many other notions were being simultaneously used in literature like virtual goods[17] or virtual items.[18]

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[6] BLAZER, Ch. Blockchains and Digital Assets. *Pierce Law Review*. 2006, Vol. 5, No. 1, p. 141.
[7] NEKIT, K. Social Media Account as an Object of Virtual Property. *Masaryk University Journal of Law and Technology*. 2020, Vol. 14, No. 2.
[8] LASTOWKA, G., HUNTER, D. The Laws of the Virtual Worlds. *California Law Review*. 2004, Vol. 92, No. 1, p. 40.
[9] BLAZER, Charles. Blockchains and Digital Assets". *Pierce Law Review*. 2006, Vol. 5, No. 1, p. 141.
[10] Ibid., p. 137.
[11] ERLANK, W. Don't Touch My Virtual Property: Justifications for the Recognition of Virtual Property. *S. AFRICAN L.J.* 2016, Vol. 133, No. 3, p. 664 footnote.
[12] MU, X. The challenge of the emergence of virtual property to the traditional legal theory and the corresponding solutions. *European Journal of Law and Technology*. 2023, Vol. 14, No. 1.
[13] Ibid.
[14] FAIRFIELD, J. Bitproperty. *Southern California Law Review*. 2014, Vol. 88, No. 4, p. 810.
[15] FAIRFIELD, J. *Owned: Property, Privacy, and the New Digital Serfdom*. Cambridge: Cambridge University Press, 2017, p. 16–17; FAIRFIELD, J. Tokenized: The Law of Non-Fungible Tokens and Unique Digital Property. *Indiana Law Journal*. 2022, Vol. 91, No. 4.
[16] FAIRFIELD, J. *Owned: Property, Privacy, and the New Digital Serfdom*. Cambridge: Cambridge University Press, 2017, p. 16.
[17] Used by Kenneth W. Eng in ENG, Kenneth W. Content creators, virtual goods: who owns virtual property? *Cardozo arts & entertainment law journal*. 2016, Vol. 34, No. 1.

In conclusion, virtual property is a notion that can be mostly found in scholarly papers in the early 2000s focusing on the legal implications of virtual worlds. Although some definitions of virtual property are available, the understanding of the notion is much clearer through via examples given by the authors. Therefore, in a broad sense, virtual property is a notion that covers anything digital and intangible that has a certain value for users and with which the user may dispose. In this sense, virtual property is not different from digital assets, or digital content, as demonstrated in the following chapters.

II. THE NOTION OF DIGITAL ASSETS

The notion of digital assets has been in use for some time, and its use can be traced back to the 1990s.[19] The term has appeared in many fields such as computer science, economics, and law. In recent years, mostly thanks to the emergence of cryptoassets and blockchain, the term also found its way into conventional media.

The notion has covered the vast majority of intangible "things" existing in digital spaces, such as digital media (e.g., images or videos), computer files, in-game objects, all sorts of accounts and cryptoassets.[20]

At first glance, the term "digital assets" would indicate that it means any asset in a digital form. The understanding of the notion is, however, slightly more complicated. First, the term "asset" may carry different meanings depending on whether it is used specifically as a legal term, economic term or whether it is used colloquially. Secondly, the notion of digital assets lacks a unified definition and one can come across different understandings of the term. This is why I will seek to analyse the different definitions and understandings of digital assets and find some common ground on their exact nature.

First, there should be some remarks on the notion of assets, since it is the core word in our studied term. As noted above, an asset can carry a different meaning in and outside of the law. Looking at assets outside of the law, one may come across definitions such as a *"resource with economic value that an individual, corporation, or country owns or controls with the expectation that it will provide a future benefit*"[21] or *"any resource or good used to generate cash flow, reduce expenses, or provide future economic benefits for an individual, government, or business*".[22] This gives us an idea that an asset is some sort of a resource that may generate a benefit.

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[18] Used by Wian Erlank in ERLANK, Wian. Don't Touch My Virtual Property: Justifications for the Recognition of Virtual Property. *S. AFRICAN L.J.* 2016, Vol. 133, No. 3, p. 664 footnote.

[19] For example, there is a publication by Diane Zorich from 1999 about facilitating intellectual property rights in digital assets, see ZORICH, D. *Introduction to Managing Digital Assets: Options for Cultural and Educational Organizations*. Oxford: Oxford University Press, 1999.

[20] ALLEN, J. G., RAUCHS, M., BLANDIN, A., BEAR, K. Legal and Regulatory Considerations for Digital Assets. In: *jbs.cam.ac.uk* [online]. [2023-05-23]. Available at: <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-legal-regulatory-considerations-report.pdf>. BLANDIN, A., BEAR, K. Legal and Regulatory Considerations for Digital Assets. [online] [2023-05-23]. Available at: <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-legal-regulatory-considerations-report.pdf>, p. 13.

[21] BARONE, A. What Is an Asset? Definition, Types, and Examples. In: *Investopedia* [online]. 29. 3. 2023 [2023-05-17]. Available at: <https://www.investopedia.com/terms/a/asset.asp>.

[22] What is an Asset? In: *MasterClass* [online]. 7. 6. 2021 [2023-05-17]. Available at: <https://www.masterclass.com/articles/what-is-an-asset>.

On the other hand, the legal understanding of the nature of assets is slightly different and, accordingly, jurisdictions can have varying interpretations and definitions. For example, under the Czech Civil Code, assets mean a person's property and debts.[23] So if the legal interpretation is simply combined with the word "digital", it would basically represent any property and liabilities in a digital form.

However, the notion of digital assets does not derive from the law. This means that when talking about digital assets, we should abandon defining the nature of assets according to the law, and instead focus on the area from which the idea of digital assets derives (i.e. the economy and investments). Accordingly, if combined with the word "digital," it is possible to imagine a resource with economic value that is digital in nature. This combination appears to be in line with what one can find under definitions of digital assets from the relevant Internet sources. For example, one source considers digital assets to be *"anything that is stored digitally and is uniquely identifiable that organizations can use to realize value. Examples of digital assets include documents, audio, videos, logos, slide presentations, spreadsheets and websites."*[24] A combination of digital form and the colloquial/economical meaning of an asset is also the idea behind the NIST Glossary definition, according to which a digital asset is *"Any asset that is purely digital, or is a digital representation of a physical asset"*.[25] The same attributes can also be found in a definition provided by Investopedia according to which a digital asset is *"anything that is created and stored digitally, is identifiable and discoverable, and has or provides value."*[26]

Based on the above, it can be concluded that digital assets on the most elementary level are:

1) something that exists in a digital form which

2) has a value or may provide benefits.

This is just a preliminary conclusion that gives us an understanding of what one may consider to be digital assets on the most basic level of an average Internet user. That is why in this analysis I will also look into legal scholar writings on the nature of digital assets.

Multiple legal papers have been written about digital assets. The authors usually sought to define digital assets. Therefore, there are numerous papers in which the authors give a definition of digital assets and define them, for example, as *"anything that can be stored and transmitted electronically (using a computer) that can be owned and thus, can have ownership and usage rights associated with it."*[27] Or we may see papers that just give examples of what the author considers to be digital assets. Lehavi for example simply states that digital assets are *"broad plethora of resources, such as e-mail and social media accounts, electronic media in digital form such as music, videos, and books, or reward points*

[23] Section 495 Civil code.

[24] Digital Assets. In: *Gartner Glossary.* [online]. [2023-05-17]. Available at: <https://www.gartner.com/en/finance/glossary/digital-assets>.

[25] In: *Computer Security Resource Center* [online]. [2023-05-17]. Available at: <https://csrc.nist.gov/glossary/term/digital_asset>.

[26] FRANKENFIELD, J. What is a Digital Assets? In: *Investopedia* [online]. 30. 6. 2022 [2023-05-17]. Available at: <https://www.investopedia.com/terms/d/digital-asset-framework.asp>.

[27] IBÁÑEZ, L. D. Blockchains and Digital Assets. In: *EU Blockchain Forum* [online]. 2018 [2023-05-24]. Available at: <https://www.eublockchainforum.eu/sites/default/files/research-paper/blockchains_and_digital_assets_june_version.pdf>.

earned by persons participating in a retail program or using a certain credit card"[28] without searching for the meaning behind the term. The Table below indicates the multiple definitions collated here from legal literature.

Digital assets, according to legal scholars:

Author	**Definition**
Luis-Daniel Ibanez	"(…) anything that can be stored and transmitted electronically (using a computer) that **can be owned** and thus, can have ownership and usage rights associated with it. Due to the diversity and variability of digital assets, ranging from **audio files to email accounts**, the scope of our report only relates to digital assets that can be tokenized using a cryptographic protocol, or so-called **crypto assets**". [29]
Natalie Banta	"Digital assets include an individual's **email accounts, personal webpages, blogs, social networking sites, documents, videos, or photo storage sites**."[30]
Amnon Lehavi	"The term digital assets may refer to a broad plethora of resources, such as **e-mail and social media accounts, electronic media in digital form such as music, videos, and books, or reward points** earned by persons participating in a retail program or using a certain credit card".[31]
John Connor	"any digital file on person's computer, as well as online accounts and memberships" [32]
Jamie B. Hopkins	"information stored in an intangible medium on computers or on another computer related technology". [33]
Laura McCarthy	"information stored in an intangible medium on computers or other computer related technology".[34]

This table above illustrates how legal scholars understand digital assets. Multiple conclusions are possible from such a collection of views. First, some authors have sought to devise a proper definition, while others completely omit this step and only list examples of what they consider to be digital assets. The latter is not necessarily unwelcome, since it

[28] LEHAVI, A. Intellectual Property, Data, and Digital Assets. In: LEHAVI, Amnon. *Property Law in a Globalizing World*. Cambridge University Press, 2019, p. 200.
[29] IBÁÑEZ, L. D. *Blockchains and Digital Assets. EU Blockchain Forum*.
[30] BANTA, N. Inherit the Cloud: The Role of Private Contracts in Distributing or Deleting Digital Assets at Death. *Fordham Law Review*. 2014, Vol. 83, No. 2, p. 801.
[31] LEHAVI, A. *Intellectual Property, Data, and Digital Assets*. p. 200.
[32] CONNOR, J. Digital Life after Death: The Issue of Planning for a Person's Digital Assets after Death. *Estate Planning & Community Property Law Journal*. 2011, Vol. 2.
[33] HOPKINS, J. Afterlife in the Cloud: Managing a Digital Estate. *Hastings Science and Technology Law Journal*. 2013, Vol. 5, No. 2.
[34] MCCARTHY, L. Digital Assets and Intestacy. *Boston University Journal of Science and Technology Law*. 2015, Vol. 21, No. 2.

likely offers the reader a more specific idea of what digital assets are in comparison with a mere vague definition.

Second, the definitions are often based on "information" or a "file" in electronic form. This appears to represent each author's attempt to describe the current technical reality. The problem here is that such a definition can often appear both forcefully technical and vague. The definitions also do not work with attributes such as value or transferability which, as will be demonstrated below, is the approach adopted by some regulatory bodies and legal groups.

One definition that stands out is the one used by Ibanez[35] since the crucial feature is that digital assets are capable of being the subject of ownership. Here I can see two issues. First, one must make an assessment of whether certain digital intangibles can be owned. Second, the outcome of such an assessment will quite often be inconclusive.

As noted, some authors merely give examples of digital assets as opposed to defining the term. In legal literature, we can even find a more radical approach, namely not offering any definition or examples at all. This, for example, is the case with Fairfield's article on NFTs, where it is left to the reader to deduce the meaning of digital assets. Indeed, he only occasionally mentions examples of digital assets, such as avatars in online games, or islands in the video game Animal Crossing, or a Facebook page.[36]

Contrary to the broad definitions offered by legal scholars as demonstrated by the table above, the Cambridge Centre for Alternative Finance came up with much more narrow understanding of this term.[37] Moreover, one the outcomes of their legal analysis is that there are two categories – the digital assets and "new" digital assets.[38] The notion of new digital assets reflects the new objects in distributed ledger systems and shall be characterized as being 1) expressive, 2) controllable via cryptographic keys and 3) compatible.[39] The authors of the analysis argue that this new category should not be treated as "standalone category for the purposes of legal categorization". However, if that is the case, it seems quite confusing to even identify this new category and call it "new" digital assets in the first place. This only added more confusion to an already chaotic debate.

Recently, a several attempts were made to offer a legal definition of digital assets in studies/consultations provided by a number of respected institutions. Specifically, three institutions were tasked with tackling the topic of digital assets, which also included the creation of a definition for the purposes of each published document. UNIDROIT's work was called "Digital Assets and Private Law". The European Law Institute issued their "Principles on the Use of Digital Assets as Security". And the UK Law Commission posted a "Consultation Paper" regarding digital assets. Similarly, the European Commission ad-

[35] IBÁÑEZ, L. D. Blockchains and Digital Assets. *EU Blockchain Forum*. [online] 2018 [2023-05-24]. Available at: <https://www.eublockchainforum.eu/sites/default/files/research-paper/blockchains_and_digital_assets_june_version.pdf>.

[36] FAIRFIELD, J. Tokenized: The Law of Non-Fungible Tokens and Unique Digital Property. *Indiana Law Journal*. 2022, Vol. 91, No. 4, p. 1264–65.

[37] ALLEN, J. G., RAUCHS, M., BLANDIN, A., BEAR, K. Legal and Regulatory Considerations for Digital Assets. [online] [2022-08-27]. Available at: <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-legal-regulatory-considerations-report.pdf>.

[38] Ibid., p. 13.

[39] Ibid.

dressed the notion of digital assets in their initiative regarding virtual reality and Web 4.0. I will not analyse the subject and main findings of the three documents here, since that is beyond the scope of this article. I will only focus on the respective understandings of the nature of digital assets, since they were the subject of all four documents. The three definitions are outlined in the table below:

Digital assets according to selected legal documents:

UNIDROIT"Digital Assets and Private Law"	"an **electronic record** which is capable of being **subject to control**"[40]
European Law Institute "ELI Principles on the Use of Digital Assets as Security"	„any **record or representation of value** that fulfills 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; (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 proprietary, obligational or other nature; and (iii) it is **capable of being transferred** from one party to another, including by way of voluntary disposition".[41]
UK Law Commission "Digital Assets Consultation Paper"	„Any **asset** that is represented **digitally or electronically**. There are many different types of digital assets, not all of which will be capable of attracting personal property rights".[42]
European Commission "An EU initiative on Web 4.0 and virtual worlds: a head start in the next technological transition"	"Digital representation of **value** that can be **traded, transferred or used** for payment. It has specific usage rights and can include anything from cryptocurrencies to digital art and other forms of intellectual property".[43]

At first glance, it is apparent that unlike the conclusions by legal scholars, the digital assets in these documents are defined on a more abstract level and do not confuse defi-

[40] In: *UNIDROIT* [online]. [2023-07-20]. Available at: <https://www.unidroit.org/wp-content/uploads/2023/04/C.D.-102-6-Principles-on-Digital-Assets-and-Private-Law.pdf>.
[41] In: *European Law Institute* [online]. 28. 7. 2022 [2023-07-20]. Available at: <https://www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Principles_on_the_Use_of_Digital_Assets_as_Security.pdf>.
[42] In: *UK LAW COMMISSION* [online]. 28. 7. 2022 [2023-07-20]. Available at: <https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jsxou24uy7q/uploads/2022/07/Digital-Assets-Consultation-Paper-Law-Commission-1.pdf, p. ix>.
[43] EUROPEAN COMMISSION. An EU initiative on Web 4.0 and virtual worlds: a head start in the next technological transition. {COM(2023) 442 final}. 2023, p. 85

nitions with examples. This is not surprising given that the working groups were tasked with preparing an analysis – thus a definition of the subject of the analysis was required.

It is also apparent that most of the documents seek to define digital assets as something "digital" or "electronic" which has 1) value 2) is transferable and 3) is subject to control. This is important, as two of the provided definitions likely would not cover the examples presented in the first table. This is actually acknowledged by UNIDROIT, who specifically distinguish between the colloquial understanding of digital assets and their legal understanding as something that requires control.[44] The requirement for control is also not something unique to these documents. For example, the proposed amendments to the Uniform Commercial Code in the US also use the concept of control when defining "controllable electronic records".[45]

What is understood as control may slightly differ. Some consensus appears to be found that control is a factual concept that may carry legal consequences.[46] But at the same time, all the documents that use the concept try to grasp the concept in their own manner. For example, the concept of control in ELI's definition is explained as *"the right to access and enjoy the non-traditional form of value that a digital asset embodies*".[47] This should include the possibility to transfer the assets which shall be also a defining attribute.[48] ELI gives examples of what would fall within their definition. This would, for example, be internet accounts, cryptoassets. However, the limit here is that nothing in contracts prevents the assignment of such digital assets.[49] On the other hand, the definition is meant to exclude the data stored in the accounts.[50]

Looking at the definitions themselves, we can observe that they seek to be as broad as possible. For example, ELI's definition includes anything digital which fulfils the respective criteria. The definition was not created by examining numerous examples and looking for common attributes. Rather, it stated some functional features for digital assets and then delineated what might fall within the given definition. However, it appears that ELI's own explanation is contradictory to their definition. Chiefly, it is unclear why data in accounts would not fall within the definition, since the possibility exists that it may actually fulfil the given attributes. The definition is also very restrictive and requires a precise case-by-case analysis, which might be impractical. On the other hand, the definition does not lead to any required reforms of current laws.

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[44] UNIDROIT. Digital Assets and Private Law. [online] April 2023 [2023-07-20]. Available at: <https://www.unidroit.org/wp-content/uploads/2023/04/C.D.-102-6-Principles-on-Digital-Assets-and-Private-Law.pdf>, p. 17.

[45] Article 12 paragraph (1) of revised UCC.

[46] This is what both UNIDROIT and UK Law Commission specifically explain as their understanding of control, see *UNIDROIT*. Digital Assets and Private Law. [online] April 2023 [2023-07-20]. Available at: <https://www.unidroit.org/wp-content/uploads/2023/04/C.D.-102-6-Principles-on-Digital-Assets-and-Private-Law.pdf>, p. 38 and UK LAW COMMISSION. Digital Asset: Final Report. [online] 27.6.2023 [2023-08-11]. Available at: <https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jsxou24uy7q/uploads/2023/06/Final-digital-assets-report-FOR-WEBSITE-2.pdf>, p. 24–25; 84.

[47] In: *European Law Institute* [online]. 28. 7. 2022 [2023-07-20]. Available at: <https://www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Principles_on_the_Use_of_Digital_Assets_as_Security.pdf>, p. 18–19.

[48] Ibid.

[49] Ibid., p. 19.

[50] Ibid.

The UK Law Commission decided on a broad and simplifying definition. This is logical given that they needed a broader subject to analyse since they sought to focus on the category of digital assets as a whole.[51] Then they looked into anything from crypto-tokens, NFTs and domain names to carbon emissions trading schemes and in-game assets. Thus, we may see that the subject of their consultation is again anything digital. What we may take from their approach is that digital assets are a broad category that does not fall under one legal category if analysed. However, this finding is a next step to the original problem of this paper, which is the definition of what digital assets are.

The definition used by European Commission represents another very broad understanding of the term since it is supposed to include *"anything from cryptocurrencies to digital art and other forms of intellectual property*". Moreover, it again associates digital assets with value. What is different is that the definition requires payment to be made. Unfortunately, it is not clear what is meant by payment. It also seems that the definition was made again with cryptoassets in mind. Only this time the body did not only think about cryptocurrency but NFTs as well. That is probably why the definition mentions digital art and intellectual property. I believe that this is an example of defining digital assets in a specific context so it can be anything that the authors need it to be for the purpose of whatever they are writing.

Looking at all four definitions, we can observe two different approaches. One defines digital assets as broadly as possible (which is what the UK Law Commission did), but acknowledging that not everything deemed digital assets may be a thing in the legal sense. The other is to narrow down the broad colloquial understanding of digital assets into what can probably be seen as a legal definition with attributes that may be useful to the law (which is control and transferability). Both approaches nevertheless lead to the result that no matter how digital assets are defined, legal analysis still needs to be conducted to determine whether a specific digital asset fits into a particular legal category. The narrowed down definition appears to only work in the context of looking for certain functions or principles that may be applied within the existing framework.

Finally, it should be mentioned that aside from legal scholars and regulatory groups, digital assets are associated with fiduciary access to digital assets and RUFADAA that has a definition of the term. According to the Act, digital assets are: *"an electronic record in which an individual has a right or interest. The term does not include an underlying asset or liability unless the asset or liability is itself an electronic record.*" However, this is a very specific example of a law that defines what it applies to with clear jurisdiction. There are more examples of legal definitions of digital assets in the previous part of this article.

To conclude, digital assets are a broad category of digital intangibles which can cover almost anything we encounter online. Attempts have been made to define the term in legal literature; however, no consensus is presently found on a definition. We can, however, observe a trend of associating digital assets with value and control in recent legal documents created by consulting bodies. This being said, the term still carries a broad collo-

[51] In: *UK LAW COMMISSION* [online]. 28. 7. 2022 [2023-07-20]. Available at: <https://s3-eu-west-2.amazonaws.com/ lawcom-prod-storage-11jsxou24uy7q/uploads/2022/07/Digital-Assets-Consultation-Paper-Law-Commission-1.pdf>, p. 3–4.

quial meaning evident mostly via authors that have similar ideas about specific examples of digital assets.

At this point, digital assets may have multiple meanings. For one, a colloquial understanding of the term. Or jurisdictions which have adopted a definition of digital assets for the purposes of their specific laws where the notion carries a specific meaning within that law. Or the current trend of introducing a legal definition of digital assets through attributes such as "value", "transfer" and "control". Consequently, any debate on digital assets requires a careful initial understanding of the respective nature of digital assets, since the notion currently suffers from considerable subjective and fragmented interpretation.

A number of questions naturally arise as to the present fragmented and subjective nature of our understanding of digital assets. For example – how does the notion of digital assets fit into the pool of many other already existing notions? Is it the same notion as data? Or same as virtual property? The following paragraphs will try to shed some light on the differences between the examined notions.

III. DIGITAL ASSETS, VIRTUAL PROPERTY AND DATA – SAME BUT DIFFERENT?

a. Virtual Property and Digital Assets

The two notions that can be concluded to have the most similarity are digital assets and virtual property. The UK Law Commission also uses the literature on virtual property in its Consultation paper on digital assets.[52] Furthermore, these two notions have some explicitly acknowledged overlap in the legal literature. For instance, Connor considers virtual property and digital assets to be synonymous.[53] Van Erp writes about both virtual property and digital assets being similar terms both relating to information.[54] Nekit uses the notion of digital assets to define virtual property rights.[55]

Both notions have a broad and a narrow meaning that appears across literature. In their broad meaning, both digital assets and virtual property refer to a wide category of "intangibles" existing in the digital environment, be it in-game objects, accounts, or cryptocurrency. However, both notions also have their own restricted meaning in which several differences may be observed:

First, the context in which the notions are used slightly differs. Virtual property is linked to virtual worlds and to ownership existing inside these worlds, whereas digital assets are used in a much broader context. Virtual property is also not usually linked to blockchain and cryptocurrency as much as digital assets.

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[52] In: *Law Commission* [online]. [2023-05-08]. Available at: <https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jsxou24uy7q/uploads/2022/07/Digital-Assets-Consultation-Paper-Law-Commission-1.pdf>, p. 2.

[53] CONNOR, J. Digital Life after Death: The Issue of Planning for a Person's Digital Assets after Death. *Estate Planning & Community Property Law Journal*. 2011, Vol. 2, p. 303.

[54] ERP VAN, S. Ownership of Data: The Numerus Clausus of Legal Objects. Revised and expanded version of an article, Ownership of Digital Assets, originally written as a contribution to a Festschrift. In: *William & Mary Law School* [online]. [2023-08-31]. Available at: <https://scholarship.law.wm.edu/propertyjournal/6/>, p. 243.

[55] NEKIT, K. Social Media Account as an Object of Virtual Property. *Masaryk University Journal of Law and Technology*. 2020, Vol. 14, No. 2, p. 208.

Second, the definition of digital assets according to soft-law documents such as ELI Principles or the UNIDROIT's study is much stricter than the "every intangible asset in cyberspace". The scope of the soft-law instruments is thus limited to those digital assets that are transferable and are capable of control.

Based on the above, I would argue that virtual property and digital assets represent an essentially identical category and are in effect the same term. The difference is simply the time these notions made it to the legal literature and that digital assets, contrary to virtual property, are a notion that seem to be finding its way into the actual laws. But simply looking at what many authors imagined under these two terms, I must conclude that the colloquial understanding is the same.

b. Digital Assets and Data

Similarly to virtual property, digital assets and data are also related notions. However, as noted in the above analysis, these two notions need to be understood as two different concepts used in a different (regulatory or legal) context.

For example, ALI-ELI Principles for Data Economy lay down how are data under their definition and their scope different from any other goods or intangibles. The reason for this difference is that data are non-rivalrous (i.e., they may be multiplied)[56] and they are not sold with permission to be utilized (as opposed to IP)[57]. Moreover, the Principles explicitly state that they are not aimed at "representative data" (which represent certain value) such as cryptoassets not "functional data" (such as computer program) but rather on *"records of large quantities of information as an asset, resource or tradeable commodity*".[58]

Therefore, these principles may provide us basic guidance when it comes to distinguishing data from digital assets/virtual property. The difference is mostly context dependent, however, the underlying message is that not everything that may be colloquially seen as data is the interest of law, especially when it comes to data economy and data sharing.

Similar observations when it comes to data and digital assets may be found in UNCITRAL's Exploratory work on legal issues related to the digital economy – reports of events that also distinguishes between data and digital assets based on their functions while acknowledging that digital assets consist of data.[59]

The UK Law Commission also seems to distinguish between what is data and digital assets. Their observation is that although everything is basically a string of data, some digital assets are more than just a digital information. This conclusion is to distinguish between what may be an object of property rights and what cannot and to avoid an unwanted reform that would make object of property rights anything digital which does not

[56] ALI-ELI. Principles for a Data Economy. In: *European Law Institute* [online]. [2023-05-22]. Available at: <https://www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ALI-ELI_Principles_for_a_Data_Economy_Final_Council_Draft.pdf>, p. 8.

[57] Ibid., p. 6.

[58] Ibid., p. 22.

[59] Exploratory work on legal issues related to the digital economy – reports of events. [online] 15. 5. 2020 [2023-05-26]. Available at: <https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/v2002569_1.pdf>, paragraph 46.

reach certain level of specificity.[60] Again, we may observe that there shall be a difference between how the law understands data and how it understands some more specific form of data, hence digital assets.

Another indication that there is a difference in data and digital assets may be found in ELI's Principles on the Use of Digital Assets as Security. Specifically, ELI states that "*unlike some forms of data, digital assets can have the attribute of certainty, to the extent that they are first amenable to exclusive and substantial control and second assignable*".[61] ELI also emphasizes this specific document focuses on the digital assets and not on underlying data itself.[62]

Two things may be derived from this. First, digital assets are a type of data. Second, they are a specific type of data which may be subject to control and can be assigned. Therefore at least on a legal level, data and digital assets should be treated differently, despite potentially belonging to the same semantic category. This, of course, may be countered by stating that since data as a term is incredibly broad, digital assets are still data. However, this leaves us with in a terminological conundrum where, in the end, everything is data in the context of some legal regulation (like the EU Data Act), but not all data may be digital assets in another context.

Based on the above, we may derive to the conclusion that data can be a very broad and abstract notion. This means that the understanding of this term shall be based upon the meaning of this notion within a specific context. This gives both legal authors and regulatory bodies a wide discretion when it comes to defining the phenomenon.

Data can also be a legal term. Recently, an official definition of the notion of data under EU law was adopted. As a result, data carry the meaning assigned to them by EU policymakers in the Data Act and Data Governance Act. All these legal definitions are again framed in a strong digital economy context where the aim is to foster data sharing and how data do not represent a specific value as opposed to for example cryptoassets. And this context is what separates data from digital assets/virtual property.

Apart from the difference between the notions found in regulatory texts mentioned above, we may find cases of legal authors distinguishing the two notions as well. For example, Lehavi differentiates between data and digital assets.[63] To do this, he borrows the understanding of the notions from Banta and van Erp. The problem is that it is not entirely clear what is the actual difference since digital assets are defined through examples (as borrowed from Banta) and data only as information stored at data carrier (as borrowed from van Erp).[64] This does not give a reader any clue as to what they should imagine under the two notions. However, the important thing is that at least for Lehavi, data and digital assets were not the same thing.

[60] In: *UK LAW COMMISSION*. Digital Assets Consultation Paper. [online] 28.7.2022 [2023-07-20]. Available at: <https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jsxou24uy7q/uploads/2022/07/Digital-Assets-Consultation-Paper-Law-Commission-1.pdf>, p. 49.

[61] In *European Law Institute*. ELI Principles on the Use of Digital Assets as Security. [online] 28.7.2022 [2023-07-20]. Available at: <https://www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Principles_on_the_Use_of_Digital_Assets_as_Security.pdf>, p. 19.

[62] Ibid., p. 20.

[63] LEHAVI, A. *Intellectual Property, Data, and Digital Assets*. In: LEHAVI, A. *Property Law in a Globalizing World*. Cambridge University Press, 2019.

[64] Ibid., p. 200.

Therefore, I argue that digital assets and data should not be understood as a same thing by law. Although the literature surrounding both of the notions deals with similar topics - most importantly with the ownership issues in one or the other – the two notions must be understood as two different categories.

Of course, there are similarities between the two. That is mostly that both are intangible in their nature and exist in digital space. However, the category of data is much more broad than digital assets.

Digital assets are valuable digital intangibles in a specific form such as digital media, accounts or cryptoassets. Data, however, are mostly (in their industrial sense) raw facts, tables or numbers. Their nature is far more dynamic than digital assets as they are collected, processed or stored. On the contrary, digital assets (in case they are transferable and controllable) are traded, stored and managed.

To sum up, digital assets consist of data (similarly as everything in cyberspace does). But digital assets are a specific object. Colloquially, when talking about data (specially manufactured data sets), one imagines fairly different objects than when speaking about digital assets. Under some legal definition, digital assets will fall under the data category. However, in a different context, this might not be the case (as it is often not in both legal literature and some soft-law instruments).

IV. DIGITAL CONTENT AND OTHER CODIFIED NOTIONS

Some relevant notions here either have been or soon might be codified. This means that they will not only carry its colloquial meaning a meaning from a different field than law. They will also have a meaning within law. This is crucial, because once something will fall within the stated category, it will trigger an application of one or another legal instrument. This may also bring some interpretational challenges. For example, Data Governance Act and Data Act define the notion of data. However, the notion of data has been examined for a decade now in legal literature and it also carries meaning outside of the law. If the legally given terminology will depart from other fields or previous legal literature, the application of these instruments might be unclear.

One of the codified notions relevant to this article is the notion of digital content within the EU law. Digital content was firstly introduced in Consumer Rights Directive[65] and defined as *"data which are produced and supplied in digital form."*[66] This definition was used also in the Digital Content Directive and the Sales of Goods Directive. Unfortunately, the Consumer Rights Directive as well as Digital Content Directive remain silent on what they mean by "data". Since both Data Act and Data Governance Act came later (and are its own autonomous norm), what all can be considered data under the digital content definition? Should we then turn to the more colloquial approach and basically treat anything that is being displayed online as data?

[65] Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council Text with EEA relevance.

[66] Article 2 paragraph 11 of Consumer Rights Directive.

Recital 19 of the Consumer Rights Directive further explains what should be understood as digital content. According to the recital, examples of digital content are *"computer programs, applications, games, music, videos or texts*". Although we may see an interpretational clues here, they are quite vague and broad.

The notion of digital content is constructed to cover wide variety of data which are offered to consumers so it contains whatever digital a consumer might be purchasing or whatever is licensed to him. The subject of digital content thus overlaps with the digital intangibles that notions such as virtual property or digital assets cover. However, digital content is a notion tied to the consumer law and therefore its use is often limited to it. Moreover, digital content sometimes applies to intangibles other than what virtual property and digital assets are. For example, the typical example of digital content are computer programs. However, computer programs itself are not what is usually considered to be virtual property or digital content.

Similarly, it is unclear how the digital content is related to typical examples of digital assets such as social media account or cryptoassets. The broad definition implies that it should be covered as well, both are, in the end, data produced and supplied in a digital form. Yet, from the recitals, it is clear that it was not intentional to cover these two digital assets.

The notion of digital content also poses a challenge as to what is its place within a legal system. It was left to the Member states to decide how they implement it. The regulation of digital content then, on one hand, creates a consumer legal framework when it comes to the digital intangibles. The framework applies to incredibly broad category of basically anything digital once it is offered to consumers. On the other hand, it leaves out the important question of how these digital intangibles actually fit into the law. This means that we are left with conceptually unfinished regulation.

To sum up, the European law nowadays recognizes the notion of digital content. This notion is constructed to cover a wide variety of data that are offered to consumers so it contains whatever digital a consumer might be purchasing or whatever is licensed to him. The subject of digital content overlaps with the digital intangibles that notions such as virtual property or digital assets cover. However, digital content carries its specific meaning within the consumer protection law and the notion has not been used in the context of the virtual property/digital assets debate. Moreover, given its consumer background, as opposed to the financial investment context of digital assets, it seems unlikely that the term will be used in the future to merge the debate on digital intangibles.

The second term that has legal definition in some jurisdictions is digital assets. This is mainly the aforementioned RUFADAA example. Additionally, other countries have introduced regulations that define digital assets. For example, Kazakhstan recently passed a law which defined digital assets as *"property created in electronic digital form with an assigned digital code, including by using cryptography and computing, [that is] registered and secured by the immutability of information on the basis of distributed data platform technology*".[67] Similarly, El Salvador is another country that has introduced the term into its

[67] Kazakhstan: New Law Establishes Legal Framework for Digital Assets and Cryptomining. In: *Library of Congress* [online]. [2023-07-23]. Available at: <https://www.loc.gov/item/global-legal-monitor/2023-04-30/kazakhstan-new-law-establishes-legal-framework-for-digital-assets-and-cryptomining/>.

legal system.[68] As a result, digital assets may have a specific meaning within a specific law in some countries.

Relatively recently digital assets have also become a codified notion under the EU law, as a result of being defined under the Data Act. This means that digital assets have a legal definition that has to be distinguished from any colloquial understanding. According to Article 2, paragraph 32 of the Data Act, digital assets are *"elements in digital form, including applications, for which the customer has the right of use, independently from the contractual relationship with the data processing service it intends to switch from*." Recital 83, of the Data Act further explains that digital assets are *"applications and metadata related to the configuration of settings, security, and access and control rights management, and other elements such as manifestations of virtualisation technologies, including virtual machines and containers*." Given the cloud computing context of the definition, it appears that digital assets within the meaning of the Data Act are anything that the customer uploads to the cloud to which he or she has the right of use. In this context, the explanation in the recital is slightly misleading from the wording in Article 2, as the recital sees digital assets as *"metadata related to the configuration of settings*". Moreover, although the definition appears broad enough to accommodate some of what are colloquially understood to be digital assets (such as digital files), it appears that legislators intended to cover a specific segment of technology. In the end, it is not entirely clear what digital assets under the Data Act are supposed to be, and whether a connection exists between the colloquial understanding of digital assets and Article 2, paragraph 32 of the Data Act.

Another example of a notion that is finding its way into the regulation and legal texts is the notion of cryptoassets. Generally, cryptoassets are considered to be a narrower term than digital assets.[69] For instance, the Swiss Federal Department of Finance then understands cryptoassets as *"digital assets that are usually recorded on a blockchain*".[70]

We may come across many attempts at definitions of cryptoassets. For example, the UK's policy paper defines them as *"A cryptographically secured digital representation of value or contractual rights that uses a form of distributed ledger technology and can be transferred, stored, or traded electronically*."[71]

MiCA[72] introduced the term cryptoassets into the EU law. According to the regulation, cryptoassets are *"a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology*".[73]

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[68] LEIVA, D. Law of issuance of digital assets in El Salvador. In: *Consortium Legal* [online]. [2023-07-23]. Available at: <https://consortiumlegal.com/en/2023/01/12/law-of-issuance-of-digital-assets-in-el-salvador/>.

[69] ALLEN, J. G., Rauchs, M., BLANDIN, A., BEAR, K. Legal and Regulatory Considerations for Digital Assets. In: *Legal and Regulatory Considerations for Digital Assets* [online]. [2023-05-23]. Available at: <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-legal-regulatory-considerations-report.pdf>, p. 13.

[70] Federal Department of Finance. Factsheet on Blockchain and cryptoassets in the financial sector: Switzerland's pioneering role on the international stage. In: *State Secretariat for International Finance SIF* [online] 24. 1. 2022 [2023-11-29]. Available at: <https://www.sif.admin.ch/sif/en/home/finanzmarktpolitik/digitalisation-financial-sector/blockchain.html>.

[71] UK Government. Factsheet: cryptoassets – key terms and definitions. In: *gov.uk* [online] 11. 4. 2023 [2023-05-31]. Available at: <https://www.gov.uk/government/publications/economic-crime-and-corporate-transparency-bill-2022-factsheets/factsheet-cryptoassets-key-terms-and-definitions>.

[72] Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, COM/2020/593 final.

On the first look, both of the abovementioned definitions have as core attributes being representation of value and that the disposition is done through distributed ledger technology. The scope of the disposition then varies since the MiCAs definition omits trading (although it can be argued that transfer is just a broader category under which trading may belong).

Looking at the definitions, we may also observe that they are not that different from what some consider to be digital assets. The transferability and value are sometimes seen as a core feature of digital assets. On one hand, this makes sense since cryptoassets are just a subcategory of digital assets. On the other hand, it begs the questions of whether some definitions of digital assets are not just modeled according to the definition of cryptoassets. In the end, transferability is a feature inherent to cryptoassets, but not to all digital assets.

Finding and shaping the legal definition of cryptoassets brings the challenge of putting the legal definitions of cryptoassets against the industry understanding of the term. However, this goes beyond the subject of this paper. Therefore, I will only limit this chapter on separating the notion of cryptoassets (either in their proposed legal definition or their colloquial understanding) from the notions of digital assets. Where the conclusion is that cryptoassets are digital assets, however, they represent a narrower category.

To conclude, it seems that currently we have two understandings of cryptoassets. One is the legal understanding of the notion within MiCA or under different regulations in other jurisdictions. And the other is the colloquial understanding that may or may not be completely in line with what the regulation requires. But similar to data, the understanding of cryptoassets depends either on the context or the specific regulation in

V. THE IMPACT OF THE TERMINOLOGICAL FRAGMENTATION ON THE APPLICATION OF THE LAW AND REGULATION

The underlying issue in this paper is whether the parallel existence of multiple notions leads to confusion and whether a unified term would be beneficial to either solving conceptual or regulatory questions.

Looking at the background of the notions, it is apparent that the context in which the notions are used may significantly differ. It also seems that the creation of the notions is closely tied to the times when they first appeared as all of them are a reaction to the technological changes. Virtual property emerged when virtual worlds appeared. Digital assets came with the cryptoassets boom. And the debate surrounding data are a consequence of the current data-driven economy.

So, what are the consequences of such terminological fragmentation? In the following paragraphs I will argue that the current state may lead to the improper application of the law – but mostly to potentially imperfect regulation.

The first consequence of the terminological confusion might be an incorrect application of the law. The law is largely about application of (often vague) rules to specific situations. However, we are seeking to apply an unanchored notion to legal categories that

[73] Article 3 Section 1. Paragraph (2) MiCA.

do not completely fit their meaning.[74] This, in most cases, are legal categories either from property law framework, data protection or intellectual property.[75] The result is that when applying the law to digital assets, data, virtual property, or any other notion that carries a similar meaning, we must first understand what these notions are, and only then we can apply legal rules. But this is an incredibly difficult task when we have to rely mostly on semantic or colloquial meanings. Moreover, the problem appears to be just an extension of a fairly old issue of categorizing and differentiating between data and information in the world of law. Thus, we may reach the conclusion that fitting any of the notions under one specific legal category is simply not possible or it may be confusing. For example, it has been quite often stated that data or information cannot be owned. However, the definition of both data and information is often quite vague and broad. This means that under some of the definitions anything can be data or information, even objects that are quite specific and do not represent only raw data. In the end, such generalization may lead to the misapplication of the law if a lawyer, judge or legislator simply assumes that no data can be owned even though the object at question actually could have been owned.

The aforementioned also opens up one very important question – does everything that falls into one category (like digital assets or data) fall under the same legal category (such as a thing or personal data), or do individual examples fall into different legal categories or different legal frameworks? And if they fall under different categories, what is the point of having one umbrella term? When dealing with individual cases, it may not matter whether a superior category applies, especially since such a superior category will not be a legal one. For example, most categories give broad examples such as video game objects, bitcoins or computer files. However, just by looking at all the examples it is obvious that it may be hard to fit them all under one legal category. Even the category of digital content, which is a legal category, is so broad that we can argue that one cannot say "digital content = a thing" or "digital content = copyrighted work". In the end, the notion of digital content works in a consumer-specific context, but not for another set of rules. I think that no matter how digital intangibles are termed, the notion only works as far as illustrating the legal and regulatory issues concerning the respective uncertain legal framework and legal protections – in other words, to show that the law works slightly differently online than offline.

Moreover, the fragmentation of the literature may cause that an important information or research on the topic may be overlooked by those who apply the law – be it attorneys or judges. Or even by the academics themselves. Therefore, unifying the debate may have positive results in the sense that everybody would be on the same page.

However, far bigger consequences may lie with the future regulation. Currently, we may see calls for the regulation of digital assets, data, digital content, cryptoassets or for technologies that are connected to the topic such as blockchain or AR/VR. In the end, the fragmentation of the notions may lead to the fragmentation of the regulation. This, in the end, may mean such regulation may overlap and be mutually exclusive.

[74] BIRNHACK, Michael a MORSE, Tal. Digital remains: property or privacy? Online. *International journal of law and information technology*. 2022, Vol. 30, No. 3, p. 281.
[75] Ibid.

The remaining question is what to do with notion of the digital assets from the legal point of view. Here, I see that we have two options:

We may separate those digital assets to which respective laws can be applied (which is what UNIDROIT did in their Principles and how they constructed their definition). Then we would have a category which can function under current private law principles and a category that does not fulfil legal requirements. For determining to which law digital assets might be easily applied we would only need a further clarification on how solve the respective practical matters. This option does not shift current laws, which may be both an advantage and disadvantage, depending on how the respective viewpoint about making sufficient changes to the existing legal system.

Or we may take the bulk of what digital assets represent colloquially and create a legal framework to fit to fit their respective nature, which would constitute a new legal field. Such a legal framework could have similarities with property laws or maybe with trust funds or intellectual property. That is for another debate. However, this change would address and thoroughly challenge their nature and we would not have speculated on defining digital assets and how the law applies to them. This again might be a viable solution for some and a bad solution for others.

To conclude, the fragmentation of the terminology coupled with the broad understanding of all the notions mostly opens up the question whether such umbrella term should not be narrowed down in order to ease the application of the law. In this sense, it is logical that UNIDROIT or ELI opted for a definition that drafts some unifying features of digital assets in order to make the application of the law to them more universal (whether their definitions match the understanding of the terms is up for another debate).

Finally, one solution (for both future research and regulation) is to clearly distinguish between specified and unspecified data. Once the law and regulation make an explicit distinction between the two, many debates on what is and is not data can be put to rest and we may start discussing what we will do with these to separate categories. Sure, the distinction might never perfectly capture the technological reality. However, with the current state of the art of the whole data economy and Internet and with the constant technological development, we might never find a perfect solution. There might always be gaps and between law and technology. However, having at least any set of rules is, in my opinion, better that the current state.

CONCLUSION

Precise understanding of a terminology is usually crucial because falling into one legal category may trigger an application of a norm. However, with digital assets, we left with almost no hard law and a few soft law instruments. Therefore, the importance of clarifying this notion lies more in the regulatory debates.

As follows from the article, it seems that all the notions of digital, assets, data, digital content and virtual property are describing a phenomenon that is *essentially* the same. The word "essentially" here is crucial. It should emphasize that the terms are *not exactly* the same, but rather that what they mean is similar in its core. If we look at the examples the authors usually give to describe what these notions cover, we may observe that the examples are almost always identical. The only difference often is the time when these

terms were coined. The early 2000s term of virtual property does not include cryptoassets simply because cryptoassets were not widely known or existed back in those times.

On the other hand, it is important to mention that the context behind all these notions differs. Therefore, we may have notions whose objects are essentially same. But the context in which these notions are being used is different.

The fragmentation of the terminology might have consequences when it comes to the regulation. The legislators is put into a tough position when they might be regulating the same phenomenon multiple times with different names. There is especially a thin line between what data and all the other notions mean. This might also have an impact on the application of the new EU norms which either define data or use the term data for another notions. In the end, we might end up with the same phenomenon existing under many names across not only legal literature but also across both soft law and hard law.