Summary

The article consists of four parts. The first part provides a brief description of the Internet and Domain Name System (DNS). The author outlines the main principles of the functioning of the DNS. The second part of the article presents a research on the definition of a domain name. Technical and social definitions of a domain name are clarified and separated. The legal nature of domain names is analysed in the third part of the article. The research is concentrated on the question whether domain names are a property. The case law of the US and German courts as well as that of the WIPO Arbitration and Mediation Center is analysed. Various approaches of different researchers are summarized. Finally, in the fourth part of the article, the author considers a possibility of recognizing domain names as the *sui generis* industrial property.

Introduction

The aim of this article is to explore the legal nature of domain names in respect of their technical and social definitive contrapositions. This is done through the analysis of different opinions of various authors aimed at achieving a more or less clear view on the definition of a domain name, its functions, relations to the property status, etc. This article may be also of interest for legislators who are considering of making a legal intervention into the world of the Domain Name System (DNS).

The subject-matter of this article is domain names and the DNS. Addressing on the Internet, the limits of property definition, intellectual property rights and trademarks may also be mentioned as supplementary topics of analysis.

The legal analysis of the abovementioned themes is based on the following methods of legal research: logical-analytical, systemic, comparative and others.
1. Internet and the Domain Name System

The Internet as the main phenomenon of the modern society appeared only a few years ago. It is a very new and almost unpredictable environment of cyber-communication. While academicians are involved in a debate about the “Internet law” as a new branch of legal system, there still remains one obvious problem which clearly derives from Internet law: the skeleton of the Internet – the domain name system, its bones – domain names.

The Internet was designed to allow vital communications to continue even if portions of the network happened to be damaged in a war. This is possible because the Internet is not just a network – it is thus a network of networks. This global web of linked networks and computers has no centralised storage location, a control point or a communication channel. There is no central authority to govern the Internet usage, no one to ask for permission to join the network, and no one to complain to when things go wrong. Moreover, the Internet is a global network with no territorial boundaries. [1: 14]

Nevertheless, one can ask, if the Internet is so decentralised, how can it operate as one unity in the interfaces of millions of end users? The answer is like this: computers and their networks have their own language which is spread all around the world – the TCP/IP (Transfer Communication Protocol / Internet Protocol). A communication sent over the network of computers travels by any number of routes to its destination. If one part of the Internet breaks down, the packet of communication just travels through another route. This is called packet switching communications protocol because it allows individual messages to be subdivided into smaller packets that are sent independently to the destination and are then automatically reassembled by the receiving computer. As a result, if computers along the route become overloaded, packets can be re-routed to less loaded computers.

An IP address is a numeric address that indicates the location of a computer on the Internet. It is represented as strings of digits divided into parts or fields. For example, 193.219.57.189 is the numeric address of the Lithuanian Law University. These four digits (from 0 to 254), separated by dots, express the network portion, the IP network address and a location portion, called the local address.

IP addresses are not created by accident. They are approved by the bodies (non-profit organisations) which co-ordinate (but not govern) the Internet: RIPE (Réseaux IP Européens) in Europe and NIC (Network Information Center) in other parts of the globe. A certain country is assigned with Internet network numbers, for example: 123.246.0–254.0–254. The central administrator of the country network distributes the sub-networks among organisations (institutions) and makes records about the route tables. [2: 14]

Such numeric addresses were designed for the digital environment of computers but not for the Internet users, who find it difficult to remember these IP numeric addresses. Consequently, the IP numeric address system has been attached with a more user-friendly system of domain names.

Every IP address is linked with a unique domain name, which is a part of the domain name system (DNS). When a domain name is typed into a computer, the Internet software automatically converts the domain name to its numbered address. Like the IP numeric addresses, the domain names are divided into fields separated by dots. For example, <www.amazon.com>. A domain name must consist of at least two parts, a top-level domain name (TLD), (like <.com> in the latter case), and a second-level domain name (SLD) (like <amazon> in the latter case). There are two types of TLDs: generic (gTLDs) and country-code (ccTLDs). For example, gTLDs are <.com>, <.org>, <.net>, <.edu>, <.int>, <.info>, <.biz>, <.museum>, etc. There are more than 244 ccTLDs in the world, which are given according to ISO standard 3166. [1: 22] For example, <.fi> (for Finland), <.lt> (for Lithuania), <.ee> (for Estonia), <.co> (for Colombia), <.tv> (for Tuvalu), etc. In some countries own generic SLDs are created. For example, <.com.au> (for Australian companies), <.ac.uk> (for academic institutions of United Kingdom), etc. In the latter case, the third-level domain name is the name that is important to the domain name holder.
After a brief overview of the Internet and DNS, it is time to take a closer look at the definition of a domain name and its legal status.

2. What is a Domain Name?

There is no debate about what the domain name really is. Various authors, regardless whether they are lawyers or IT specialists, usually provide the same definition like, for example, the one offered by the Norwegian researcher T. R. Gulliksen: "Domain names are the plain word references to the IP addresses." [1: 21] Elen Rony and Peter Rony have defined a domain name as "[a] unique alpha-numeric designation to facilitate reference to the sets of numbers that actually locate a particular computer connected to the global information network" [3: 603]. The German lawyer S. Geiseler-Bonse states that "domain names are alpha-numeric names which substitute the numeric IP addresses of computers necessary to identify and contact a computer on the Internet." [4: 1]

We can clearly see that these definitions are purely technical. As the Bulgarian researcher G. Dimitrov admits, a domain name definition is clear from the technical point of view. "However, up to now there is no serious doctrinarian research giving a clear answer on what the domain name is from the legal point of view." [5: 2] The legal point of view should correspond to the social and economic aspects of domain names. The DNS was first introduced in 1984, when the Internet was still used mainly for research purposes and had not yet experienced its economic success. A technical definition was sufficient twenty years ago. But this has changed dramatically since those days. Today the economic importance of domain names is greater than ever, and it is still rising. Not only for the new market companies that are conducting their whole business solely over the Internet, but also for the long-existing traditional companies advertising themselves online. [4: 1–2]

The technical definition acknowledges the only reason that a domain name exists for: mnemonic solution. Most authors reveal some kind of a discovery: a domain name is not really some name, they say, actually, it is a number which is hidden by some word or abbreviation. And why is this number hidden? Because then it is easier to remember. So, technically it is clear that a domain name functions only as a mnemonic solution. But are these functions the only ones that a domain name performs? Again, technically, the answer is "Yes".

Most authors stress the comparison (or correlation?) between the domain names and the "vanity numbers" (commercial telephone numbers) mostly used in the US, also known as 1-800 numbers. The International Telecommunications Union has developed a standard for keyboards of telephones in which a group of letters is assigned to each digit (2 – ABC, 3 – DEF, 4 – GHI, etc.), so that numbers become names: again, names are easier to remember than numbers. SHELL, for instance will be 74355. The system is not entirely consistent, as each digit will represent three letters, except "7" and "9", which will each represent four. Thus, the same combination of digits can stand for a different combination of letters. [6: 308] There of course is a difference from a domain name, because each domain name must be unique (if the SLD is the same, the TLD must be different anyway). But some authors do not pay much attention to this difference and quickly find a solution to the problem: if telephone numbers are turned into names in this case, do they become some kind of property? Of course not, they answer, because telephone numbers are a part of technical service. And, they conclude, so are the domain names.

What would happen to the world if it recognised things only in technical terms without taking into consideration economic, legal and social points of view? Let us analyse trade marks as an example. We know that a trademark is defined as words, symbols, or other devices used to distinguish the goods of one person from those of another. As we see, technically a trademark is some kind of a symbol which is used to mark the goods. But its main function (this is important from the legal point of view) is not to be attached to every product so that a customer could recognise the goods he/she wants to buy. Its main function is distinction from other goods. Moreover, this function is not the only one. According to
a WIPO research, it is concluded that trademarks are also capable of functioning as 1) the identifier of the origin (the source), 2) a symbol of the quality, and 3) the means of advertisement. [7] These three additional functions are not mentioned in the legal acts regulating trademarks, but they are very important for the legal environment of trademarks.

So, let us see what functions are performed by domain names. Firstly, domain names distinguish domains (portions of the cyberspace that usually are websites) of one person from those of another. Secondly, a domain name identifies the origin (the source) of the domain. Thirdly, a domain name may serve as a symbol of quality (for example, many people think that the domain name <www.amazon.com> is a symbol of good electronic customer services). Fourthly, a domain name is the means of advertisement. As we clearly see, the functions of a domain name correspond to some extent the same way to those of the trademark. This is very important in trying to find an acceptable definition for the domain name. So, maybe it is not only an alpha-numeric association of certain IP address, but also the means that are capable of distinguishing the website of one person from that of another? Or that it is a device which states the source of the website? For example, the British lawyer J. Fell defines domain names as “unique names that identify Internet sites” [8]. This is of course a very abstract definition, but it recognises the identifying of Internet sites as the main function of domain names. The French researcher V. Sédallian admits: “Les entreprise américaines ayant un service Web ont généralement adopté un nom de domaine composé de: <raison sociale.com>.” [9: 34] This raison sociale of the SLD is very important in the search for a relevant definition for the domain names. These are wise and useful suggestions for the law-making bodies that are preparing to legally intervene into the domain name system. It gives us a clue to the legal definition of domain names. This legal definition is very important in trying to understand the legal nature of domain names, and, finally, to regulate these “bones of the Internet” with the help of international or national legislation.

3. Are Domain Names a Property?

Not only lawyers are concerned with the question whether domain names are a property. Businessmen, tradesmen and especially financiers ask the same question when they have to evaluate a company in terms of exact numbers: euros or dollars. Property is first of all an economic category, and laws may do little about defining its features. This is obvious when we talk about real estate, money or other valuable material things. But legal regulation sometimes is vital in deciding whether intangible objects may be a property. In evaluating a company, a financier may ask the question whether a domain name should be included into the list of property owned by the company. And what would a lawyer advice to a financier in this case? Moreover, what about a possibility to use a domain name as a loan collateral or as a pledge? J. Lipton states that charges and mortgages are unadvisable until the proprietary status of domain names is clarified. [10] Let us have a more detailed examination of this economic and juridical problem.

The business of domain name trading is prospering today. For example, the domain name <www.business.com> was sold for 7.5 million US dollars. As the Russian lawyer V. B. Naumov admits, not only SLDs, but even ccTLDs are a matter of valuable contracts: the state of Tuvalu sold the right to administer the domain <.tv> for a period of twelve years. The contract was evaluated in 50 million US dollars. [11: 159]

Domain names are bought, sold on the secondary market every day; they are leased, they are appraised and they are even collateralized. Does all this mean that a domain name is a “property” under the law? If so, what type of property is it?

**US Cases**

The most comprehensive analysis of this question is provided in the cases of US courts.
First and foremost, the Network Solutions, Inc. (NSI) indicated in its domain name registration policy that a domain name is a property. In *Network Solutions, Inc. v. Clue Computing, Inc.*, the NSI stated that it had no interest in the property under dispute and was prepared to assign the registration and use of the `<clue.com>` domain name as determined by the court. [1: 23]

The Circuit Court of Fairfax County tried to define the domain names in its decision in the *Umbro International, Inc. v. 3263851 Canada, Inc./Network Solutions* case. The court found that the domain name was used in the form of "intangible intellectual property". It becomes clear that the court reached such a conclusion due to the following reasons: a) domain names could be evaluated as such, and b) under the US regulations for trademark protection, the interested domain name holder could apply and be granted with registration of the domain name as a trademark in the Patent and Trademark office. [5: 2]

It is interesting to emphasise that in the context of the Federal Anticybersquatting Consumer Protection Act (ACPA), it is held that a domain name is a form of "property", since the ACPA expressly allows *in rem* lawsuits against the domain name itself rather than against the domain name owner. [12: 1-26.10] In one case the owner of the defendant domain names argued that the ACPA's *in rem* provision was invalid because a domain name "is merely data that forms a part of the Internet addressing computer protocol and, therefore, is not a property." The court rejected this argument remarking that "there is no prohibition on a legislative body [here, Congress] making something property." The court added that "even if a domain name is no more than data, the Congress can make data property and assign its place of registration as its situs." Moreover, in *Porsche Cars North America, Inc. v. Porsche.net* the Fourth Circuit Court of Appeals rejected the argument by various domain name defendants in an ACPA *in rem* case that "domain names are not property – only an address." The court stated that the "Congress plainly treated domain names as property in the ACPA." [12: 1-26.11]

The reasoning of the American court is very solid. It is very important not only because it rejects the idea that a domain name can't be a property, but also because it denies the vital importance of a domain name's technical definition in the legal aspects of its usage.

Although the interpretation of the ACPA is very clear, in other contexts US courts failed to establish clearly whether domain names were "property". For example, in *Network Solutions, Inc. v. Umbro International, Inc.* the Supreme Court of Virginia stated that "whatever contractual rights the judgement debtor has in the domain names at issue in this appeal, those rights do not exist separate and apart from NSI's services that make domain names operational Internet addresses." [13] In this case the court holds the domain name to be a part of the registrant's services, thus clearly not a property. But as the American lawyer R. A. Badgley emphasises, the *Umbro* ruling was criticized in *Kremen v. Cohen* (also known as "sex.com" case) by the California Federal District Court, which ultimately recognized a domain name as some type of "intangible property". Subsequently another California Federal Court in *Online Partners* case stated that a "domain name is intellectual property that maybe attached by the law." [12: 1-26.12–1-26.14]

In conclusion, the US courts usually recognise domain names as "property". This is obvious in the cases that deal with *in rem* lawsuits according to the ACPA. Moreover, if the domain names are considered to be a property, in some cases the US courts clearly admitted that domain names were "intangible property" and should be conferred intellectual property status.

**ICANN Arbitration**

In *Map Supply v. On-line Colour Graphics* the panel made the following remarks: "The Respondent argument does raise the interesting question whether a web designer once given control over a domain name by the client can retain it as a security for payment. In my view, this may be so. The law may recognise some sort of lien or charge against a domain name. To assert such a claim is to assert a legitimate interest." [12: 1-26.14–1-26.15]
Regretfully, it is probably the only case in the ICANN’s Uniform Dispute Resolution Policy framework that indirectly deals with the legal nature of domain names. Anyway, this citation alone proves that domain names may be treated as “property” in international domain name disputes as well as in the US cases.

Germany

The decisions of German courts were contradictory concerning the legal determination of domain names. The main legal rule that was referred to in favour of legal protection of domain names was § 12 of the German Civil Code, which is the basic rule in the law of signs. This provision is very important in the cases where leges speciales are not applicable, i.e. when there is no acting in the course of trade. Furthermore, it leaves space for a flexible interpretation due to the general wording. As the German author S. Geiseler-Bonse emphasises, § 12 applies to all names of natural and legal persons, to abbreviations of these names, trade names, and to all other distinctive signs. Even a domain name can be granted such protection. [4: 11] In early cases the courts were afraid to link § 12 to domain names. The most important decision rejecting its characterisation as a sign was passed by the District Court of Cologne in the kerpen.de case. The court held that the domain name did not fulfil the name/identification function necessary for protection under § 12 of the German Civil Code. According to the court, it was rather comparable to a phone number or a zip code. [4: 3] Maybe this argumentation was convincing from the technical point of view, but it was not enough if we start thinking about social and economic aspects. As it was admitted earlier, domain names are not created for mnemonic purposes only; they are chosen in order to distinguish a person/company registered under the domain name from other participants on the Internet. This distinctiveness is identical to other signs protected under § 12. The turning point in upholding the abovementioned interpretation was the heidelberg.de case. [14] The parties were: on the side of the plaintiff was the city of Heidelberg and on the other side, a private IT company. The defendant had registered the domain name in order to present a database with information about the Rhein-Neckarregion in which the city of Heidelberg was located. The court held that the city’s right to its name was infringed by the domain name. The internet-users surfing to this domain name would expect information presented by the city and not about the city of Heidelberg. A number of other cases followed this precedent. This means that German courts do not interpret a domain name as some kind of telephone number and determine its nature by the capability to distinguish portions of the Internet.

Despite these convincing developments that produce increasing evidence about the proprietary nature of domain names, some authors still deny the new “species” in the property world or fail to make any profound conclusion. For example, the Bulgarian researcher G. Dimitrov states that the registration of a domain name is based on a contractual relationship between the applicant and the registrar. This contract shall be determined as a kind of service contract (Umbro case is given again as an example). Finally, G. Dimitrov concludes that it is possible to find legal means and ways to protect the domain name holders. [5: 5] This means, firstly, that the domain name itself cannot be protected, secondly, it is the domain name holder who is protected, not the domain name owner. The researcher also explores the content of this service contract. The main obligation for the applicant is the payment of registration and/or annual fee, and for registrar – to accord the registered domain name to the registrant, to administer the domain name server, to administer and update the WHOIS database, to associate the domain name with a certain IP address, etc. [5: 4] But we clearly see that these services are purely technical and do not state that the registrar “provides a domain name” (because it is provided by the registrant and the registrar simply includes this name into the list) and that it is consumed by the registrant (services must be consumed, but how is it possible to consume the domain name itself?).

These considerations nolens volens give rise to the question about the source (or the origin) of a domain name. In the example mentioned above that a domain name is rather a
part of services, it should be stated that the source of the domain name is the service provider. But who would try to start convincing that, let’s say, <www.urova.fi> derives from FICORA (Finnish Communications Regulatory Authority), but not from the Lapland University situated in Rovaniemi? Even if someone registered a generic domain name like <www.coffee.com>, who would argue that maybe ICANN (Internet Corporation for Assigned Names and Numbers) is the source of this domain name, and not some coffee drinker who has registered this domain name because he likes to collect and publish stories about coffee on his private website? The French researcher V. Sédallian upholds this position and clearly states that “un nom de domaine est une indication d’origine”. [9: 34]

It seems that some researchers fail to distinguish domain from the name. The famous Dutch information law promoter E. Domering compares addresses in the real world and the addresses in the cyberspace and raises a question with the underlying meaning, „Has anyone ever argued that citizens should be able to derive their claims from the addresses they live at? I don’t think so.” [6: 301] E. Domering admits that “compared with addresses in the real world, a cyberspace address has been reduced [bold by D. S.] to a name without a place (as we can see on the World Wide Web) to a picture, an icon on the screen of a PC that we can click on and gain access to all the addresses, products and services associated with it.” [6: 306] However, it has to be stressed that a cyberspace address has not been reduced to anything, it remained as such, but the domain which can be found according to that address was simply given a name. On the other hand, E. Domering is right that a “place, address, name and trademark now coincide”. [6: 306]

We have to remember that domain is purely a technical matter. It is identified by numbers and is, thus, an Internet address. We should not confuse the Internet address (designed by the registrar) with the name of its domain. The domain is portioned, administered and provided by the registrar to the registrant. The name is constructed/created/chosen by the registrant. That is why the domain name itself (and not the domain) is a property.

If a domain name is a property, this automatically means that there should be an owner or that it at least can be owned by someone capable of creating his/her ownership rights.

The Norwegian researcher T. R. Gulliksen states that usually, “the person or company that registers a domain name is called ‘the domain name holder’, not ‘the domain name owner’”. In contrast, a person or company that has legal rights to a trademark is called the “trademark owner”. One may ask whether this difference in terminology has any legal significance. If it means that a domain name is just a service similar to the status of the telephone numbers, then it is not a property […]” [15: 26]. We have already analysed and determined that a domain name cannot be a service, because the service provider is not its source and it cannot be consumed. But the question raised by T. R. Gulliksen is very important, because it (if it’s really not accidental) shows not only a precaution of those who create new rules for the domain names, it also states that a legislative body (in a wider sense including domain name registrars) must choose the legal status of a domain name in favour of the proprietary content, otherwise we will face a logical nonsense: a property without its owner. This nonsense, regretfully, has already become a reality: for example, in Australia and Belgium, where domain name holders are considered to be licences.

4. Domain Names as *sui generis* Intellectual Property

If we have finally established that a domain name is a property, it is appropriate to analyse what kind of property it is.

According to the Convention Establishing the World Intellectual Property Organization [16], intellectual property consists of two branches – copyright and industrial property.

Industrial property is related with the rights for scientific discoveries, industrial designs, trademarks, service marks, and commercial names and designations, as well as protection against unfair competition.
It is worth mentioning here a specific object of industrial property – know-how. The rights to know-how are not confirmed by any legislative instrument, while all other objects of industrial property are validated by legal acts.

Copyright and industrial property are distinguished as follows: by copyright the author seeks to protect the carrier or the exact embodiment of the idea which itself remains in an unhampered use; thus the protection of industrial property means that the idea itself is protected. Domain names have the features of the industrial property. Their use mostly reminds that of the trade names or trademarks, but obviously it is neither former nor latter. Most likely the conclusion ought to be that domain names are the sui generis industrial property. They have all the features that are required in such position except one: there are no laws to indicate this. Such situation may be defined as legal hesitation: legislative bodies do not have enough grounds for accepting domain names as a new type of industrial property. Domain name owners are forced to register domain names as trade marks in order to establish their full protection under the existing laws. This double (or sometimes triple, if we include trade names as well) registration of the brand is not reasonable system taking into consideration of the future developments of the domain names in the light of their interpretation by the courts.

**Conclusion**

1. We may find a correlation between the type of a definition that we acknowledge and the legal nature of a domain name that we derive from that definition. The more technical the definition is, the less it is possible that a domain name is a property, and the less technical the definition is (i.e. more economic, social and as it was admitted “legal”), the more it is possible to be regarded as a property. This can be illustrated by the following diagram:

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<thead>
<tr>
<th>Technical definition</th>
<th>Social, economic and &quot;legal&quot; definition</th>
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<tr>
<td>Domain name <strong>not</strong> property</td>
<td>Domain name <strong>is</strong> property</td>
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2. We have proved that a domain name is not a service, thus, it is not an Internet address. First of all, it is a name. And a name ought to be protected by the law. Legislative bodies are not sure about the legal nature of domain names, but the latest developments in the courts indicate that proclaiming domain names as the sui generis industrial property is the right way for legislators to take.
14. Heidelberg.de case <http://www.uni-muenster.de/jura.itm/netlaw/heidelberg.html> (accessed 03.05.22).

Interneto domenų pavadinimų teisinės prigimties problemas

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