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Private Law Regulation of Innovations and Creditors' Rights: What We Can Learn from Domain Name Rights for Blockchain Rights

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Abstract: The most significant innovation in recent years has been blockchain technology. Such innovations demand a response from the law. The most significant innovation of the last twenty-five years has been the internet. The relative lack of government regulation in the domain of public law has been one of the key features of the internet. The private law regulation of domain name rights has been left to private institutions to arrange this through contract law. Contract law, however, has its limitations when it comes to pledging, seizing and the forced sale of domain name rights. Qualification problems with regard to the nature of domain name rights and the prescribed mode of contract renewal have resulted in difficulties with respect to pledging and seizing domain name rights. These cannot be solved by bottom-up self-regulation. I will demonstrate this by discussing the law in the Belgian, Dutch, German and American jurisdictions. In particular, I will address the unique bottom-up self-regulation of domain name rights in the Netherlands, which aims to replace statutory rules in the field of property law by contractual provisions. Lastly, I will discuss what we can learn from domain name rights for blockchain rights. I will argue that, learning from domain name rights, we should not try to fit in similar issues with regard to blockchain rights in existing private law or contractual arrangements, but should develop tailor-made statutory private law rules so as to avoid the same legal uncertainty as with domain name rights.

Résumé: L'innovation la plus significative de ces dernières années a été la technologie de la blockchain. De telles innovations exigent une réponse de la part du droit. L'innovation la plus significative de ces dernières vingt-cinq années a été l'internet. L'absence relative de réglementation gouvernementale dans le domaine du droit public a constitué l'une des caractéristiques essentielles de l'internet. La réglementation de droit privé du droit des noms de domaine a été laissée à des institutions privées pour l'organiser à travers le droit des contrats. Toutefois, le droit des contrats a ses limites en ce qui concerne le nantissement, la saisie et la vente forcée de noms de domaine. Des problèmes de qualification concernant la nature du droit des noms de domaine et le mode prescrit de renouvellement de contrat ont abouti à des difficultés en matière de

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nantissement et de saisie de noms de domaine. Celles-ci ne peuvent être résolues par une autorégulation 'bottom-up'. Je vais le démontrer en commentant les systèmes juridiques belge, néerlandais, allemand et américain. Je m'attarderai plus particulièrement sur l'autorégulation 'bottom-up' unique du droit des noms de domaine aux Pays-Bas, qui vise à remplacer les règles légales dans le domaine du droit de la propriété par des dispositions contractuelles. Enfin, j'examinerai ce que le droit des noms de domaine peut nous apprendre pour le droit de la blockchain. J'estime, en me basant sur le droit des noms de domaine, que nous ne devrions pas adapter le droit privé ou des systèmes contractuels à des questions similaires concernant le droit de la blockchain, mais plutôt développer une réglementation de droit privé faite sur mesure afin d'éviter la même incertitude juridique que pour le droit des noms de domaine.

Zusammenfassung: Die bedeutendste Innovation der letzten Jahre war die Blockchain-Technologie. Solche Innovationen werfen rechtliche Fragen auf. Die bedeutendste Innovation der letzten 25 Jahre war das Internet. Die relativ geringen staatlichen Regulierungen im Bereich des öffentlichen Rechts waren eines der Hauptmerkmale des Internets. Die privatrechtliche Regelung der Domainnamensrechte wurde privaten Institutionen überlassen, um dies mittels des Vertragsrechts zu regeln. Das Vertragsrecht unterliegt jedoch Beschränkungen, wenn es um die Pfändung, Überweisung und den Zwangsverkauf von Domainnamensrechten geht. Einordnungsprobleme in Bezug auf die Art der Domainnamensrechte und die vorgeschriebene Art der Vertragsverlängerung haben zu Schwierigkeiten bei der Pfändung und Überweisung von Domainnamensrechten geführt. Diese können nicht durch bottom-up Selbstregulierung gelöst werden. Ich werde dies demonstrieren, indem ich die Rechtslage in Belgien, den Niederlanden, Deutschland und Amerika erörtere. Ich werde mich insbesondere mit der in dieser Form einzigartigen bottom-up Selbstregulierung der Domainnamensrechte in den Niederlanden befassen, die darauf abzielt, die gesetzlichen Bestimmungen im Bereich der Eigentumsrechte durch vertragliche Bestimmungen zu ersetzen. Abschließend werde ich diskutieren, was wir aus den Domainnamensrechten für Rechte bezüglich Blockchain lernen können. Ich werde argumentieren, dass wir, mit Blick auf die Erfahrungen bei den Domainnamensrechten, nicht versuchen sollten, ähnliche Fragen in Bezug auf die Blockchain-Rechte in das bestehende Privatrecht oder in vertragliche Vereinbarungen zu integrieren, sondern maßgeschneiderte gesetzliche Regelungen für das Privatrecht entwickeln sollten, um dieselbe rechtliche Unsicherheit wie bei den Domainnamensrechten zu vermeiden.

Keywords: Private law regulation of innovations; property v. contract law; transfer, pledge, attachment, seizure, forced sale; bottom-up self-regulation v. state legislation; domain name rights; cryptocurrencies, blockchain rights.

Mots-clés: Réglementation de droit privé sur les innovations; Le droit de la propriété par opposition au droit contractuel; Cession, nantissement, saisie-exécution, saisie, vente forcée; Autorégulation bottom-up par opposition à la législation étatique; Droit des noms de domaine; Crypto-monnaies; Droit de la blockchain.

Schlüsselbegriffe: Privatrechtliche Regulierung von Innovationen; Sachen- v. Vertragsrecht; Übertragung, Pfändung, Zwangsverkauf; bottom-up Selbstregulierung v. staatliche Gesetzgebung; Domainnamensrechte; Kryptowährungen, Blockchain-Rechte.

1. Introduction

1. One of the most significant innovations in recent years has been blockchain technology, supporting bitcoins and other cryptocurrencies transactions.[1] Such innovations demand a response from the law. One of the most significant innovations of the last twenty-five years has been the internet. Just like blockchain and cryptocurrencies, the economic and societal interests involved with internet and domain names are tremendous.[2] The relative lack of government regulation in the domain of public law has been one of the key features of the internet. As a consequence, the private law regulation of domain name rights, including the allocation of domain names and the regulation of the relationships between domain name holders and the registry, has been left to private institutions to arrange this through contract law. Although contract law can define the (often long-term) relationship between the domain name holder and the registry and even arrange for the 'transfer' of domain name rights, thereby defining domain name rights as such, it has its limitations when it comes to pledging,[3] seizing[4] and the forced sale of domain name rights.[5] Forced attempts to squeeze in domain name rights in existing law combined with qualification issues with regard to the nature of domain name rights and the lack of legislation have resulted in legal uncertainty with respect to pledging and seizing domain name rights, which cannot be solved by bottom-up self-regulation. Especially the contractual framing of the 'transfer' of domain name rights poses problems for pledging and seizure, also when it comes to a forced sale of such rights. I will demonstrate this by discussing the different points of view that are taken in legal doctrine and case law with regard to a pledge, seizure and the forced sale of domain name rights in different jurisdictions (Belgium, Germany, the Netherlands, the U.S.A.), which show many similarities. Also, I will address the unique bottom-up self-regulation of domain name rights in the Netherlands, which aims to replace statutory rules relating to a pledge, seizure and the forced sale by contractual provisions. Lastly, I will discuss what we can learn from domain name rights for blockchain rights. Although the differences between internet and domain name rights, on the one hand, and blockchain and cryptocurrencies, on the other, are indeed significant, these innovations have in common that they are not easily compatible with existing private law. I will argue that, learning from domain name rights, we should not try to fit it into a pledge,

1 Cf. K. Torpey, 'Why the Blockchain is the Biggest Thing Since the Internet', *Nasdaq* 19 April 2016, www.nasdaq.com/article/why-the-bitcoin-blockchain-is-the-biggest-thing-since-the-internet-cm608228.

2 Cf. the list of the most expensive internet domain names that have been sold, en.wikipedia.org/wiki/List_of_most_expensive_domain_names.

3 Alternatively, security interests, collateral.

4 Confiscation and/or seizure by the State in criminal proceedings will not be discussed.

5 Alternatively, attachment, garnishment.

seizure and the forced sale of blockchain rights and cryptocurrencies in existing private law, but should develop tailor-made statutory private law rules instead.

2. After a short, introductory overview of the current state of affairs in legal doctrine and case law in the aforementioned jurisdictions (para. 2), I will discuss various qualifications of domain name rights, starting with a description of the current general terms and conditions of registries and the domain name right as a service contract (para. 3), followed by the domain name right as a personal claim or intangible personal property right and as a bundle of contract rights or property right *sui generis* (para. 4), with some notes on no-assignment clauses (para. 5) and as an IP right or an 'absolute' right (para. 6). Legal doctrine and case law of the aforementioned jurisdictions (Belgium, Germany, the Netherlands, the U.S.), as well as a decision of the European Court of Human Rights (ECHR), will be discussed in these paragraphs in relation to transfer, pledge, seizure and forced sale. I will then go into the contractual arrangement for pledge, seizure and forced sale in the Netherlands (para. 7), before making some concluding remarks on the regulation of domain name rights (para. 8) and drawing lessons from domain name rights for blockchain rights (para. 9).

2. Legal Doctrine and Case Law Struggling with Domain Name Rights

3. The Netherlands, Belgium, Germany and the U.S.A. have not introduced statutory provisions dealing with the pledge or seizure of domain name rights,[6] leaving the issues to legal doctrine and case law. Belgium has introduced legislation on domain name rights, but that does not deal with the transfer, pledge, seizure or forced sale of these rights.[7] The issues have not been addressed on a European level either.[8]

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6 For example in the Dutch Civil Code (*Burgerlijk Wetboek* or Dutch BW) or the Dutch Code of Civil Procedure (*Wetboek van Burgerlijk Rechtsvordering* or Dutch RV). Cf. Dutch Supreme Court (*Hoge Raad*) 11 December 2015, ECLI:NL:HR:2015:3554, *NJ* (*Nederlandse Jurisprudentie*) 2016/79, remarking that domain name rights are not regulated by statute. The fact that there are no specific statutory provisions does not mean that there may be general provisions, which may cover the pledging and attachment of domain name rights, such as Art. 9 UCC.

7 Cf. Art I.18, para. 12 Belgian WER (*Wetboek van economisch recht* or WER), which describes domain names as 'an alphanumeric reproduction of a numeric IP (internet protocol) address that allows identifying a computer connected to the internet', and Art. XII.22 and XII.23 Belgian WER, both on the registration of domain names. The Code does not provide for the transfer, pledging or attachment of domain name rights.

8 Cf. recently, European Commission, Report to the European Parliament and the Council, On the implementation, functioning and effectiveness of the .eu Top-Level Domain (Brussels 4, December 2017), *COM* (2017) 725 final.

4. As from 2000, there have been attempts in the literature to present a dogmatic substantiation of the transfer, pledging and seizure of domain name rights. The attention given to the legal aspects of domain names rights in legal doctrine reached its peak in the years 2001-2006 and has subsequently subsided, with the exception of in the United States. In Dutch literature, relatively speaking, much attention has been given to the legal nature of domain name rights in relation to the question of whether domain name rights are capable of being transferred, pledged and seized; several law journal articles, most of which appeared between 2000 and 2006, have addressed one or more of these topics. After my publication in 2009 discussing the various point of view taken in Dutch literature,[9] to my knowledge, apart from legal commentaries,[10] little or nothing has been published about the subject.[11] In Belgian literature, there have been relatively few publications on the nature of domain name rights related to the transfer, pledging and seizure of domain name rights and they appeared in 2003 and 2009, also referring to Dutch literature.[12] In German literature, apart from legal commentaries,[13] the topic was discussed in Cornelia Birner's dissertation on domain name rights as objects of recourse and in insolvency, which appeared in 2005.[14] In U.S. legal doctrine the topics have not only relatively gained a great deal of attention, comparable to the Netherlands, but also relatively recent attention, possibly due to related litigation and case law.[15] Among other things, in legal doctrine domain

9 J.W.A. Biemans, *NTBR* 2009, pp 2-10.

10 Cf. C.J.J.C. van Nispen, J.L.R.A. Huydecoper & T. Cohen Jehoram, *Industriële eigendom Deel 3. Vormen, namen en reclame* (Deventer: Kluwer 2012), pp 265-267; Asser/Bartels & Van Mierlo 3-IV 2013/6; Asser/Hijma 7-I* 2013/128a.

11 Cf. A.M.E. Verschuur commenting on District Court (*Rechtbank*) Noord-Holland 17 August 2016, ECLI:NL:RBNHO:2016:6239, IER 2017/58 (Marron Jachtbouw/De Media Groep).

12 T. Heremans, *Domeinnamen: een juridische analyse van een nieuw onderscheidingsteken* (Brussels: Larcier 2003); T. Heremans & D. Muyldermans, 'Domeinnamen in het Belgisch vermogensrecht', *I.R.D.I.* 2003(1), p 13; and J. Malekzadem, 'Beslag op domeinnamen. Een eerste verkenning', *Rechtskundig Weekblad* 2009-10/36, p 1498-1506.

13 See e.g. Stephan Welzel, 'Zwangvollstreckung in Internet-Domains', 3. *MMR* (*MultiMedia und Recht*) 2001; Thomas Schafft, 'Internet-Domains als Kreditsicherheit', *BB* (*Betriebs-Berater*) 2006 Heft 19, p 1013; and MüKoBGB & Damrau, 7. Aufl. 2017, § 1274 Rn. 14 & 88; Schimansky, Bunte & Lwowski, *Bankrechts-Handbuch* (Munich: C.H. Beck 2017), § 93. Pfandrechte, Rn. 200; Prütting, Wegen & Weinreich, *BGB Kommentar*, BGB § 1274 – VII. Immaterialgüterrechte, Rz. 26.

14 See Cornelia Birner, *Die Internet-Domain als Vermögensrecht: zur Haftung der Internet-Domain in Zwangsvollstreckung und Insolvenz* (Tübingen: Mohr Siebeck 2005); Cf. also Stephan Welzel, 3. *MMR* 2001.

15 Cf. James P. Nehf, 'Domain Names and Websites as Collateral: Managing Uncertainty in Secured Financing Transactions', 29 March 2016, SSRN Paper ID 2756189, code 55981; Frederick M. Abbott, 'On the Duality of Internet Domain Names: Propertization Its Disconents', 3. *N.Y.U. Journal of Intellectual Property and Entertainment Law* Fall 2013, pp (1-52) at 1; Daniel Hancock, Note, 'You Can Have It, But Can You Hold It? Treating

name rights have been considered to be contracts, claims, intangible personal property rights, absolute rights and property rights *sui generis*.

5. Just as legal doctrine, (lower) case law demonstrates different approaches to the question of whether domain name rights can be pledged or attached. In Dutch (lower) case law there is no decisive decision on whether or not domain name rights can be pledged and attached, but most courts seem to question the possibility as such.[16] In Belgium, to my knowledge, there is no leading case law that has provided a solution for the issues discussed. In Germany, in 2005, the German Federal Court of Justice (*Bundesgerichtshof* or BGH)[17] ruled on the possibility to pledge domain names according to German law, which will be discussed below (para. 4.5).[18] In the United States, there has been relatively a great deal of case law on domain name rights compared to Europe.[19] The decisions vary considerably in their qualification of domain name rights, with consequences for the possibility of pledge, seizure and forced sale, as further explained below. Besides, the issues at hand do not pose problems if the

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Domain Names as Tangible Property', 99. *KY. L.J.* 2010-2011, p 1985 ; Juliet M. Moringiello, 'False Categories in Commercial Law: The (Ir)Relevance of (In)Tangibility', 35. *Fla. St. U. L. Rev.* 2007, p 119; Warren E. Agin, 'I'm a Domain Name. What Am I? Making Sense of Kremen v. Cohen', 14. *J. Bankr. L. & Prac.* 2005, p 3; Juliet M. Moringiello, 'Seizing Domain Names to Enforce Judgments: Looking Back to the Future', 72. *U. Cinn. L.R.* Fall 2003, p 95; Beverly A. Berneman, 'Navigating the Bankruptcy Waters in a Domain Name Rowboat', 3. *J. Marshall Rev. Intell. Prop L.* 2003, pp (61-87) at 61; Alexis Freeman, 'Internet Domain Name Security Issues: Why Debtors Can Grant Them and Lenders Can Take them in This New Type of Hybrid Property', 10. *Am. Bankr. Inst. L. Rev.* Winter 2002, p 853; Xuan-Thao N. Nguyen, 'Cyberproperty and Judicial Dissonance: The Trouble with Domain Name Classification', 10. *Geo. Mason L. Rev.* 2001, p 183, 184.

16 For example, District Court Gelderland 14 December 2016, ECLI:NL:RBGEL:2016:7040, no. 4.2, remarking that it is unclear whether domain name rights can be pledged; and Court of Appeal (*Hof*) 's-Hertogenbosch 17 January 2007, ECLI:NL:GHSHE:2007:AZ6522, JOR 2007/78, IER 2007/50, allowing for the recovery seizure of the domain name. More lower case law can be found on www.domjur.nl for internet domain name case law, including the pledging and attachment of domain name rights, and on www.rechtspraak.nl.

17 BGH 5 July 2005, VII ZB 5/05, JurPC Web-Dok. 110/2005, abs. 1-16. Cf. LG München I, 12 February 2001 – Az. 20 T 19368/00.

18 § 857, para 1 ZPO (*Zivilprozessordnung,* the German Code of Civil Procedure).

19 Cf. for example, *Kremen v. Cohen*, 337 F.3d 1024, 1030 (9th Cir. 2003); *Harrods, Ltd. v. Sixty Internet Domain Names*, 302 F.3d 214 (4th Cir. 2002); *Caesars World, Inc. v. Caesars-Palace.Com*, 112 F. Supp. 2d 502 (E.D. Va. 2000); In re *Larry Koenig & Assoc.*, 2004 WL 3244582 (Bankr. M.D. La. 2004) (slip opinion); *Office Depot v. Zuccarini*, 596 F.3d 696, 701-02 (9th Cir. 2010); and *Dorer v. Arel*, 60 F. Supp. 2d 558 (E.D. Va. 1999); *Zurakov v. Register.com*, Inc., 304 A.D.2d 176, 760 N.Y.S.2d 13 (1st Dep't 2003); and *Network Solutions, Inc. v. Umbro International, Inc.*, 259 Va. 759, 529 S.E.2d 80 (Va. 2000); *Palacio Del Mar Homeowners Ass'n v. McMahon*, 95 Cal. Rptr. 3d 445, 449 (Ct. App. 2009). See also *re* Forchion 130 Cal. Rptr. 3d 690, 709-10 (Cal. Ct. App. 2011); and *re* Paige, 413 B.R. 882 (Bankr. D. Utah 2009).

domain name holder is in bankruptcy.[20] Generally, a bankruptcy trustee can dispose of (sell and 'transfer') the domain name rights in the same manner as the domain name holder before bankruptcy. Contract renewal as a mode of transfer is not an issue.

6. In my opinion, legal doctrine and case law show that no satisfactory answer has been given so far, which is, as I will argue, mostly due to forced attempts to squeeze domain name rights into existing statutory law and a combination of a lack of clarity with regard to the qualification of domain name rights and a lack of appropriate statutory rules dealing with the specific nature of domain name rights. Although, from a technological point of view, blockchain rights are very different from domain name rights, they share the characteristic that they do not fit within the existing rules on pledge, seizure and forced sale. Learning from domain name rights, we should develop specific statutory rules for blockchain rights addressing these issues in order to avoid the same legal uncertainty as there is with domain name rights.

3. Qualification of the Domain Name Right: Subscription or Services Contract, Comparable to a Rental Contract

3.1. The Domain Name

7. In construing the legal character of domain names and domain name rights, it is important to realize that there are no parties with an entitlement to the internet as such.[21] The internet is a system that exists by the grace of an amount of connections, as a result of which the users of the World Wide Web can access one another's documents and web pages, and thus exchange data. Unlike trademarks or trade names, but like telephone numbers, only one person may use a domain name, i.e. only one person can be the holder of a domain name.[22] A body decides per 'top level domain' (or 'TLD'; e.g. .com, .nl, .de, .be and .edu) who is entitled to use a particular domain name.[23] The

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20 Cf. Beverly A. Berneman, 3. *J. Marshall Rev. Intell. Prop L.* 2003, p (61-87) at 61; J.W.A. Biemans, 'Het domeinnaamrecht: het abonnement in faillissement', in N.E.D. Faber et al. (eds), *Overeenkomsten en insolventie* (Deventer: Kluwer 2012), pp 271-278; C. Birner, *Die Internet-Domain als Vermögensrecht,* Ch. 4-5.

21 See also P.L. Reeskamp, 'De .nl domeinnaam in het .nl vermogensrecht', *Computerrecht* 2000(6), p (275) at 276; R.D. Chavannes, 'Stichting Internet Domeinregistratie: verlichte despoot of slordige monopolist?', *Mediaforum* 2000(10), p (331) at 333; W. Snijders, 'De openheid van het vermogensrecht. Van syndicaatszekerheden, domeinnamen en nieuwe contractsvormen', in S.C.J.J. Kortmann et al. (eds), *Onderneming en 10 jaar nieuw Burgerlijk Recht* (Deventer: Kluwer 2002), pp (27-58), at 49.

22 For that reason Reeskamp has compared a domain name with a parking space, see P.L. Reeskamp, *Computerrecht* 2000(6), p (275) at 277.

23 A distinction can made between country code TLDs, such as .nl, .de and .be and other TLDs, such as .com and .edu. In this contribution, I will primarily focus on country code TLDs, as they are

institutions awarding the TLDs (registry operators or network information centres) have a public trust holding and management function. They serve as a trustee for the benefit of the internet community, without 'owning' the domain name rights.

3.2. Not Intended for Property Law or Property Rights

8. The issues relating to the transfer, pledging and seizure of domain name rights are rooted in the early design of the structure and registration of domain names. Jon Postel, a computer scientist at UCLA, who greatly influenced the systems used to register domain names, apparently recognized that the question of property rights would become an issue. In 1994, he remarked the following on the topic: 'The designated manager is the trustee of the top-level domain for both the nation, in the case of a country code, and the global Internet community. Concerns about 'rights' and 'ownership' of domains are inappropriate. It is appropriate to be concerned about 'responsibilities' and 'service' to the community.'[24] Again he remarks about this: 'In other words, it is clear the domain name system, was never intended to grant property rights in domain names. While Jon Postel's comments carry no legal authority, they illustrate the domain name systems was designed for engineers to meet their computer networking needs, not by lawyers for our needs.'[25] Something similar is true for blockchain and cryptocurrencies, which are designed to meet currency and payment system needs.

3.3. Contract Law and General Terms and Conditions Define Domain Name Rights

9. In the spirit of Jon Postel's view, much of the regulation of domain name rights has been bottom-up self-regulation by private institutions through contract law.[26] Registry operators generally use contracts and general terms and conditions (GTCs) to shape the relationship between domain name holders and

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most likely to be subject to government regulation (if any). Cf. Cf. Arturo Azuara Flores, *To Each Country, Its Own Law and Domain: The Legal Structures of CcTLD's in comparative perspective* (ProQuest: 2008). Private international law aspects will not be discussed.

24 J. Postel, RFC 1591 'Domaine Name System Structure and Delegation', March 1994, to be found at www.ietf.org/rfc/rfc1591.txt.

25 Warren E. Agin, 'Domain Names as Collateral. Are We All Just Kidding Ourselves?', 19. *Business Law Today* September/October 2008(1), p 22.

26 Cf. the World Intellectual Property Organization [WIPO], *The Recognition of Rights and the Use of Names in the Internet Domain Name System, Report of the Second WIPO Internet Domain Name Process*, WIPO Publication No. 843 (3 September 2001), p 73–76, referring to the 'ICANN Contractual Model' (www.wipo.int/amc/en/processes/process2/report/html/report.html).

the registry.[27] The content of the GTCs is often supported by additional information on the website of the registry operator. These contracts and GTCs define 'domain name rights' per TLD as such. For blockchain and cryptocurrencies, it is not a contract, but mostly technology which defines the relationship.

10 In the Netherlands, the body which decides who is entitled to use a particular .nl domain name is the *Stichting Internet Domeinregistratie Nederland* (Internet Domain Registration Foundation or *SIDN*).[28] SIDN has regulated its relationship with domain name holders through the law of contract and its 'General Terms and Conditions for .nl Registrants'[29] and provides additional information on its website. In Belgium, the institution that decides on the use of .be domain names is DNS Belgium.[30] Its relationship with domain name holders is regulated through the law of contract and general terms and conditions, the '*Algemene voorwaarden voor .be-domeinnaamregistraties*' ('Enduser Terms and Conditions for .be'),[31] supported by additional information on its website. In Germany, the authority deciding on .de domain names is DENIC (*Deutsches Network Information Center*),[32] using DENIC Domain Terms and Conditions[33] and DENIC Domain Guidelines.[34] In the United States, the .us domain names are awarded by Neustar.[35] As these names are not often used, I will focus on the .com domain names, which are administered by Verisign.[36] Verisign has regulated its relationship with domain name holders through the law of contract and its general terms and conditions, entitled 'Verisign Public DNS Terms of Service'.[37] In other jurisdictions, such as France or England & Wales, registries also use contracts and general terms and conditions.[38]

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27 Eventually it is the registry that is the trustee; I omit the position of registrants as database administrators, often operating between the registry and the registrants (domain name holders).

28 The SIDN was given its powers in 1996 by the Centre for Mathematics and Information (het Centrum voor Wiskunde en Informatie) in Amsterdam (www.cwi.nl/), which were delegated in 1986 by the Stanford Research Institute. See F.P. VAN KOPPEN, 'De vermogensrechtelijke status van het recht op de domeinnaam', *MvV* (*Maandblad voor Vermogensrecht*) 2006, p 111; and Th.F. DE JONG, *De Structuur van het Goederenrecht* (Groningen: s.n. 2006), pp 145–146.

29 See www.sidn.nl.Version of 1 March 2016. The SIDN GTC (previously: the 'Regulations for the Registration of Internet Domain Names', or the 'SIDN Regulations') are subject to changes.

30 www.dnsbelgium.be/en

31 Version 6.0, 31 October 2016. www.dnsbelgium.be/nl/documenten/algemene-voorwaarden-voor-be-domeinnaamhouders; www.dnsbelgium.be/en/documents/enduser-terms-and-conditions-be#

32 www.denic.de/.

33 www.denic.de/en/terms-an-conditions/.

34 www.denic.de/en/domain-guidelines/.

35 www.registry.neustar/

36 www.verisign.com; cf. www.icann.org/resources/agreement/com-2012-12-01-en.

37 www.verisign.com/en_US/security-services/public-dns/terms-of-service/index.xhtml

38 See www.afnic.fr/ and www.nominet.uk/.

3.4. 'Transfer' of the Subscription Through Contract Renewal

11. Just as regulating the relationship between the registry and the domain name holder through a contract does not pose any problems, the regulation of the 'transfer' of the domain name right through contract law also does not pose any problems as such.[39] Most registries have construed the 'transfer' of domain name rights through contract law as *contract renewal*. Although the word 'transfer' implies a classic transfer of a property right, it is not in fact a transfer, as it is something completely different. This prescribed way of 'transferring' partly defines the legal nature of domain name rights, and also, as we will see below, it complicates matters of pledge, seizure and forced sale. For blockchain and cryptocurrencies something similar is true; technology not only defines the relationship between cryptocurrency holders, but also the 'transfer' of their rights, which also clashes with third party entitlements such as pledge and seizure.

12. In the Netherlands, from the SIDN's GTCs and its 'Form for changing the registrant of a .nl domain name' it follows that the transfer of a domain name right takes place through a contract renewal.[40] The existing legal relationship of the old domain name holder does not pass to the new one; there is neither a contract transfer, nor an assignment of the domain name right.[41] If two parties wish to transfer a domain name right, the SIDN will enter into a new agreement while the old agreement is terminated.[42] If another person wishes to become the new domain name holder, the SIDN's cooperation is required. This is understandable, as this

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39 Even though one could consider a domain name right to be a property right and therefore expect the 'transfer' of this property right to be regulated by property law.

40 The last sentence of Art. 9 GTC reads as follows: 'Legally speaking, changing the registrant involves the cancellation of the old registration contract and entering into a new registration contract.' The 'Form for changing the registrant of a .nl domain name' states, among other things: 'The new holder declares that the new holder and the SIDN have entered into an agreement in conformity with the 'Registration contract .nl domain name' (see www.sidn.nl for the contents of this agreement).'

41 Cf. Art. 6:159 Dutch BW (contract transfer) and Art. 3:94 Dutch BW (assignment). From the literature it appears that, under Art. 13 para. 1 and later under Art. 15 para. 1 of the Regulations which were applicable at the time, the domain name right could only be conveyed to a new domain name holder by means of a contract transfer (Art. 6:159 Dutch BW). P.L. Reeskamp, *Computerrecht* 2000(6), p (275) at 282 (but cf. p 279); W. Snijders, in *Onderneming en 10 jaar nieuw Burgerlijk Recht*, p (27) at 46; W. Snijders, 'Ongeregeldheden in het vermogensrecht' (I), *WPNR* (*Weekblad voor Privaatrecht, Notariaat en Registratie*) 2005/6607, p (79) at 84-85; Th.C.J.A. van Engelen, *Onverkoopbare vermogensrechten* (Deventer: Kluwer 2003), p 100. *Different opinion*: R.D. Chavannes, *Mediaforum* 2000, p 333; F.P. van Koppen, *MvV* 2006, p (111) at 112; Th.F. de Jong, *De Structuur van het Goederenrecht*, pp 152-153, who qualify – in my opinion wrongly – the transfer of the domain name right as a transfer through assignment under Art. 3:94 Dutch BW.

42 Cf. also Art. 16.1 sub k GT, which states that in case of execution within the framework of pledge or seizure ('transfer') the contract will be terminated.

person will be subject to various obligations, such as a duty of care and the obligation to pay a fee for the use of the domain name.

13. In Belgium and Germany the transfer of domain name rights also takes place through a contract renewal. In Belgium, the DNS Belgium GTC mention the procedure for the transfer of an internet domain name right, using a transfer code.[43] The website contains 'step by step' information on the procedure for transferring a domain name right.[44] The transferee (the new 'end user') has to expressly accept the general terms and conditions for end users (Step 4). In Germany, Article 6, paragraph 1 DENIC GTC states that the domain name is transferable, unless it is subject to a Dispute entry (§ 2 (3)). According to Article 6, paragraphs 2 and 3 DENIC GTC, the transfer of the domain name requires that the present domain holder terminates its contract and DENIC registers the domain in the name of the intended new domain holder[45]; it thus requires that the new domain holder enters into a contract with DENIC. In my opinion, it is clear from both procedures that the transfer of the domain name takes place through a contract renewal.[46]

14. In the United States, according to Paragraph 3 of the Verisign GTC, Verisign grants the user a non-exclusive, *non-transferable*, non-sublicensable, *non-assignable* limited right and a licence to (a) use the RDNS IP Addresses for the purposes of accessing and using the Service and (b) access and use the Service, which also implies that the sale of an internet domain name right can only be effected through a contract renewal. The U.S.A. Verisign GTC and its website do not contain other information on transfer.

15. Lastly, the SIDN has a contractual procedure for the pledging and seizure of domain name rights, which will be discussed separately below (para. 7). The DENIC, DNS Belgium and Verisign GTCs and websites do not contain any information, rules or guidelines on the pledging or seizure of domain name rights.[47]

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43 Art. 6, s. d End-user Terms and Conditions for .be', Version 6.0, 31 October 2016. See also Art. 10 regarding the complaints procedure, which mentions the transfer of the domain name right as one of the possibilities.

44 www.dnsbelgium.be/nl/domeinnaam-beheer/overdragen-domeinnaam; www.dnsbelgium.be/en/domain-name-maintenance/change-registrant#

45 www.denic.de/en/domains/de-domains/holder-change/; www.denic.de/en/domains/. Cf. www.denic.de/en/domains/de-domains/provider-transfer/.

46 Below (para. 5) it will be discussed how these prescribed modes of transfer relate to no-assignment clauses, pledge and attachment.

47 The DNS Belgium website does contain some information on the attachment of domain name rights, but it does not answer the question whether attachment is possible, and neither does it address the question of how it should be done (if at all possible). www.dnsbelgium.be/nl/nieuws/kan-een-rechter-een-be-domeinnaam-beslag-nemen; www.dnsbelgium.be/en/news/can-judge-seize-be-domain-name#

3.5. Domain Name Rights are Subscriptions, Service Contracts, Comparable to Rental Agreements

16. The various contracts and GTCs of the registries have the following in common. The website of the registry describes the procedure that a person must follow to use a specific domain name. He or she[48] must submit an application to the registry, which may be declined for various reasons, for example, if a domain name has already been given away, if there are social reasons to decline or if a person has failed to meet his (payment) obligations towards the registry in the past. Once accepted, domain name holders enter into an agreement with the registry. Pursuant to the general terms and conditions, the domain name holder owes a fee for the duration of the registration, for example one year. If the registrant fails to pay the fee, the registration may be suspended and even finally terminated. If the registration is terminated, the domain name holder is no longer entitled to use 'his' domain name. The domain name holder has other obligations, such as the obligation to compensate the registry for possible damages suffered or costs incurred if the domain name holder has acted unlawfully vis-à-vis a third party by using the domain name.

17. As long as the domain name holder pays his fee and complies with other obligations, he has an exclusive right to use the domain name. Although he has a 'relative' right vis-à-vis the registry, this right is an exclusive right, as only the domain name holder is entitled to use the particular domain name vis-à-vis the registry and therefore third parties cannot exercise this right. This exclusive right may be compared to the right of a lessee who rents an apartment and who, based on the rental agreement, is the only person who is entitled to use the apartment; only the lessee may use the apartment, not a third party. Unlike the rental of an apartment, where the lessor (as a rule) is the *owner* of the immovable property (or the apartment right),[49] the registry, as pointed out above, is not entitled to the domain names, the use of which it awards to domain name holders.[50] Just as the right of a lessee, the right to use the domain name cannot be separated from the

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48 For simplicity, I will use 'he' and 'his'.

49 The contractual lessor can also be a real estate agent acting in his own name as a mandatee on behalf of the owner as the mandator.

50 It is conceivable that the provisions on leases are applicable *by analogy*, insofar as this is in conformity with the nature of a domain name right. A domain name itself is not a property right but simply a name or a number. Cf. R.D. Chavannes, *Mediaforum* 2000, p 333; N.A.N.M. van Eijk, 'Domeinnamen zijn nummers!', *Mediaforum* 2000(11), pp 360–363; T. Heremans, *Domeinnamen*, nr. 61. *Different opinion*: H.W. Wefers Bettink & K. Gilhuis, 'Domeinnamen zijn geen nummers!', *Mediaforum* 2001(1), p 9; Th.F. de Jong, *De Structuur van het Goederenrecht*, pp 156–158. De Jong does not consider the use of the domain name, but the domain name itself as the performance. However, performing is always an act (or refraining from acting), but not a name, number or property item as such. The agreement between the SIDN and the domain name holder can for that

obligations related to the use of the domain name; the domain name 'right' consists of both contractual rights and obligations. In my opinion, the domain name 'right' *is* essentially the contractual position of the domain name holder, which may consist of one or more property rights (the contractual right to use a domain name), but which cannot be equated to such a property right. It may also be compared to licence agreements for the continuous use of IP rights or computer software. Just as with a lease contract and licence agreements, the obligation of the person granting the lease or licence is mainly *passive*, allowing for continuous use after the use has been granted.

3.6. Passive Obligation to Allow for Continuous Use Within a Long-Term Relationship – Not Comparable To Receivables

18. The qualification of domain name rights as long-term service agreements, or 'subscriptions', comparable to rental agreements, explains why the 'transfer' of domain name rights is constructed as, and only possible through, a contract renewal, for which the cooperation of the registry is required. The right to the continuous use of the domain name cannot be separated from the person of the domain name holder, nor from his long-term obligations attached to his use of the domain name, such as his duty of care and the recurring annual obligation to pay the necessary fees. Also, the obligation of the registry to (passively) allow for the continuous use of the domain name is an obligation which is different from obligations such as (single or recurring) obligations to pay a fee, to transfer goods or to (actively) provide for services (delivering newspapers).[51] Although the term 'domain name *right*' may give reason to suspect otherwise, the domain name right is a contractual rather than a property right.

3.7. Legal Doctrine and Network Solutions v. Umbro

19. As indicated above, the most important arguments for the view expressed above is the analysis of the documentation provided by the registries themselves. For example, the Dutch SIDN calls the domain name right a 'subscription', which denotes the status of a contract, rather than a single property right, and requires a contract renewal as a means of transfer. It is in the best interest of a registry to consider the domain name right as a contract, in order to maintain control over the domain names and domain name holders.

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reason (strictly) not be regarded as a lease agreement pursuant to Art. 7:201, para. 2 Dutch BW. *Different opinion*: P.L. Reeskamp, *Computerrecht* 2000(6), p (275) at 279–280.

51 Cf. the distinction made in Dutch Hoge Raad 23 March 2018, ECLI:NL:HR:2018:424 (Credit Suisse/OSX).

20. Legal doctrine supports this view, although not all authors draw similar conclusions. In the Netherlands,[52] Verstappen is of the opinion that the term domain name right denotes the legal status which arises from the legal relationship with the SIDN.[53] In Belgium, Tom Heremans, although arguing that a domain name right is an intangible personal property right, notices that the use of the domain name right depends on the fulfilment of the contractual requirements, such as payment and the non-infringement of trademarks, and that DNS Belgium uses a contract renewal to establish the transfer.[54] In the U.S., Juliet Moringiello recognizes that the transfer of domain name rights requires the approval of the registry, and argues that there should be no restrictions on transfers when it comes to forced sales by a creditor, in the sense that a registrar cannot have reasonable objections to such a transfer of a domain name right and should comply with court orders.[55] Also Frederick Abbott recognizes that the transfer of domain name rights constitutes a new registration and contract.[56] In a way, also the recommendation in German and U.S. legal doctrine to use a security 'transfer' of a domain name right, instead of a pledge of the domain name right (as that involves too much uncertainty),[57] underlines this view.

21. As for the case law, in 2000, the Supreme Court of Virginia ruled in *Network Solutions v. Umbro*[58] that a domain name registration is the product of a contract for services between the registrar and the registrant, containing mutual obligations and liabilities and involving a relationship of personal confidence, and therefore it is not subject to garnishment and execution. According to the decision, if the garnishment of the registrar's services is possible, 'practically any service would be garnishable', also the garnishment of a prepaid satellite television subscription service. It is not clear whether the decision should be read so that, according to the Supreme Court of Virginia, a domain name right is a contractual right to use a domain name (which may be

52 Apart from my view, as expressed in J.W.A. Biemans, *NTBR* 2009, para. 7 and 8.

53 L.C.A. Verstappen, 'Overdracht onder algemene titel', in M.J.G.C. Raaijmakers & L.C.A. Verstappen, *Onderneming en Overdracht onder algemene titel* (Deventer: W.E.J. Tjeenk Willink 2002), p 129.

54 T. Heremans, *Domeinnamen*, nos 65–69.

55 Juliet M. Moringiello, 72. *U. Cin. L.R.* Fall 2003, p 95, para. V.A, V.B.2 and VI.

56 Frederick M. Abbott, 3. *Journal of Intellectual Property and Entertainment Law* 2013, p (1) at 45 and 1.

57 James P. Nehf, *SSRN Paper ID 2756189, code 55981*, (p 1) at 47; Warren E. Agin, 19. *Business Law Today* 2008(1), p 22.

58 *Network Solutions, Inc. v. Umbro International, Inc.*, 259 Va. 759, 529 S.E.2d 80 (Va. 2000). Cf. also, *Dorer v. Arel*, 60 F. Supp. 2d 558 (E.D. Va. 1999); *Zurakov v. Register.com*, Inc., 304 A.D.2d 176, 760 N.Y.S.2d 13 (1st Dep't 2003); and *Palacio Del Mar Homeowners Ass'n v. McMahon*, 95 Cal. Rptr. 3d 445, 449 (Ct. App. 2009).

an intangible personal property right), but which is a product of a contract for services, which hinders garnishment, or whether the domain name right *is* the service contract. Legal scholars, such as Frederick Abbott,[59] seem to interpret the judgment in the first manner, trying to reconcile Network Solutions v. Umbro with the view that domain name rights are intangible personal property rights; others, like James Nehf,[60] see it as a contract for services. The question is whether this distinction matters, if, by ruling that the contractual right is 'inextricably bound' to the services contract, as the court did, it means that this right cannot be detached from the contract.

4. The Domain Name Right Viewed as a Personal Claim, an Intangible Personal Property Right or Contract Right(s); Problems with Pledge, Seizure and Forced Sale

4.1. Introduction

22. Quite understandably, most legal scholars are not in favour of the aforementioned approach. If domain name rights are considered to be service contracts, requiring a contract renewal for a transfer, they do not easily fit into the existing statutory rules, making a pledge, seizure and a forced sale impossible. Legal doctrine and case law have therefore made various attempts to construct the domain name right as a (property) right. As such it is right to conclude that the service agreement or 'subscription' between the registry and the domain name holder can be divided into several components, consisting of separate rights and obligations. The right of the domain name holder to the continuous use of the domain name is one of these components.

23. Most legal scholars and courts have been of the opinion that the domain name holder's right to a domain name, as defined in the contract with the registry, is a 'right to be exercised vis-à-vis one or more specific persons'. Legal doctrine and case law are however divided on the question of how such a right should be qualified: as a claim, a contract right, an intangible personal property right, a bundle of all contractual rights arising from the legal relationship with the registry and/or as a proprietary right *sui generis.*[61] I will

59 Frederick M. Abbott, 3. *Journal of Intellectual Property and Entertainment Law* 2013, p (1) at 1-52.

60 James P. Nehf, *SSRN Paper ID 2756189, code 55981*, p (1) at 12.

61 In this approach, domain name rights can be reduced to a single right or can be considered to be a collection of all contractual rights arising out of the service contract with the registry, sometimes reframed as a *sui generis* property right. As the line between the two views is sometimes thin, I will discuss both views in this paragraph. Other 'rights to be exercised against one or more persons' being membership rights, stock and options are not applicable, which is the reason why they will be not be discussed.

discuss all of these views below in relation to pledge, seizure and forced sale. Framing domain name rights in this way seemingly has the advantage that domain name rights should fit into existing statutory rules, but faces several statutory difficulties, as will be explained below per jurisdiction.

4.2. The Netherlands

24. In the Netherlands, among others, Paul Reeskamp, Remy Chavannes, Henk-Jan Boukema and Bart Krans, Dick van Engelen and Frans van Koppen have argued that the domain name right is a personal claim (*vordering op naam*).[62] As consequence, they reason, it can be transferred through the assignment of claims,[63] and pledged through the pledge of claims.[64] However, they ignore the fact that according to the GTCs of the Dutch SIDN, the 'transfer' of domain name rights has to take place through a contract renewal, which excludes a transfer through assignment, and, on the same grounds, may also exclude a pledge of such claim.[65] Also, when taking a stance on the collection and/or forced sale of (the proceeds of) such a claim, several authors, for example Paul Reeskamp,[66] are not consistent in their qualification of domain name rights as claims.[67] If a domain name right can be reduced to a claim, then the provisions of the Dutch BW and the Dutch RV stand in the way of pledge and seizure. Execution in conformity with the Dutch BW and the Dutch RV requires, in principle, the collection of the claim. If no money is collected, the proceeds collected on the claim will be collected through the forced sale thereof. In view of the nature of the performance, i.e. (mainly) allowing for the continuous use of the domain name, this type of execution *is not* possible, just as a lessee's claim for the use of the rented object cannot be collected and sold.[68]

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62 See P.L. Reeskamp, *Computerrecht* 2000(6), p (275) at 278–279 and 282; R.D. Chavannes, *Mediaforum* 2000, p 333; H.J.M. Boukema & H.B. Krans, 'Laat de wetgever met rust', *NJB* (*Nederlands Juristenblad*) 2001, p (1614) at 1615; Th.C.J.A. van Engelen, *Onverkoopbare vermogensrechten*, pp 99–100; F.P. van Koppen, *MvV* 2006, p (111) at 112 et seq.; and Th.C.J.A. van Engelen, 'Zekerheidsrechten op intellectuele eigendomsrechten: een heikel avontuur', *MvV* 2008, p (147) at 151.

63 Art. 3:84, para. 1 in conjunction with Art. 3:94, para. 1 or 3 Dutch BW.

64 Art. 3:84, para. 1 in conjunction with Art. 3:98 in conjunction with Art. 3:236, para. 2 in conjunction with Art. 3:94, para. 1 or Art. 3;239, para. 1 Dutch BW.

65 Art. 3:83, para. 2 in conjunction with Art. 3:98 Dutch BW. This will be further discussed below (Para. 5).

66 P.L. Reeskamp, *Computerrecht* 2000(6), p (275) at 282; W. Snijders, in *Onderneming en 10 jaar nieuw Burgerlijk Recht*, p (27) at 46; W. Snijders, *WPNR* 2005(6607), p (79) at 85; Th.C.J.A. van Engelen, *Onverkoopbare vermogensrechten*, p 100, referring to W. Snijders, in *Onderneming en 10 jaar nieuw Burgerlijk Recht*, p (27) at 46.

67 See J.W.A. Biemans, *NTBR* 2009, para. 3.

68 Art. 475a, para. 1 Dutch RV for seizure and cf. Art. 3:246, para. 5 Dutch BW for pledge. See W. Snijders, in *Onderneming en 10 jaar nieuw Burgerlijk Recht*, p (27) at 49–50; J.W.A. Biemans,

Even if the pledge or seizure of such a claim would be possible, and the claim would not be collected, but would be sold, as advocated for example by Frans van Koppen,[69] the requirement of a contract renewal as the only way of transferring the domain name right hinders the forced sale of the domain name right. A contract renewal, for which the cooperation of the registry is required, is not a 'transfer' within the meaning of the Dutch BW[70] and is not as such provided for in the Dutch RV.[71,72]

25. Wouter Snijders is of the opinion that the domain name right is a *sui generis* property right, consisting of a bundle of all rights of the domain name holder arising from the agreement with the SIDN. The *sui generis* property right comprises the whole assets side of the legal relationship and consists of a sum of claims and other contract rights.[73] Under Dutch law, in the case of a *sui generis* property right, such a right would in principle be neither transferable[74] nor pledgeable,[75] and the seizure and forced sale thereof would have to be effected, in his view, pursuant to a different provision on rights 'the execution of which has not been provided for elsewhere',[76] a provision which however has the same difficulty as discussed above. The provision is problematic, as it has been specifically drafted for property rights

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'Vorderingen op naam niet vatbaar voor beslag', in N.E.D. Faber et al. (eds), *Knelpunten bij beslag en executie* (Deventer: Kluwer 2009), para. 2.1 and 6.

69 Art. 474bb Dutch RV. Cf. F.P. van Koppen, *MvV* 2006, p (111) at 113. Cf. P.L. Reeskamp, *Computerrecht* 2000(6), p (275) at 282.

70 The 'transfer' of a legal relationship under Art. 6:159 Dutch BW is not a transfer within the meaning of Art. 3:84, para 1 Dutch BW. Cf. T.M., Parl. Gesch. Boek 6, p 585. For that reason, a contractual relationship cannot, as being 'transferable', be regarded as a property right within the meaning of Art. 3:6 Dutch BW. *Different opinion*: P.L. Reeskamp, *Computerrecht* 2000(6), p (275) at 276 and 282; and W. Snijders, 'Ongeregeldheden in het vermogensrecht' (II), *WPNR* 2005(6608), p (94) at 94.

71 Art. 3:84, para. 1 Dutch BW.

72 J.W.A. Biemans, *NTBR* 2009, pp 2–10. This view has been shared by C.J.J.C. van Nispen, J.L.R.A. Huydecoper & T. Cohen Jehoram, *Industriële eigendom Deel 3. Vormen, namen en reclame*, pp 265–267. Cf. Asser/Bartels & Van Mierlo 2013(6).

73 W. Snijders, in *Onderneming en 10 jaar nieuw Burgerlijk Recht*, p (27) at 48; W. Snijders, *WPNR* 2005(6607), p (79) at 84–85.

74 Cf. W. Snijders, in *Onderneming en 10 jaar nieuw Burgerlijk Recht*, p (27) at 46–47; but with a different view W. Snijders, *WPNR* 2005(6608), p (94) at 94, where he seems to consider Art. 3:95 Dutch BW as a means off the delivery of a domain name right, in such a way that the transfer of a domain name right as a property right sui generis in his opinion does not conflict with Art. 3:83, para 3 Dutch BW.

75 Art. 3:83, para. 3 in conjunction with Art. 3:81, para. 1 or Art. 3:228 Dutch BW.

76 Art. 474bb Dutch RV. See W. Snijders, in *Onderneming en 10 jaar nieuw Burgerlijk Recht*, p (27) at 49–50; W. Snijders, *WPNR* 2005(6607), p (79) at 85.

and refers to seizure rules on moveable goods, requiring a property law transfer, as opposed to a contract renewal.

4.3. Belgium

26. In Belgium,[77] Tom Heremans has written on the pledge and seizure of domain name rights as intangible personal property rights. His contribution shows that there is uncertainty as to whether it is possible to pledge or attach domain name rights, and, if so, under which provision(s) should a pledge or seizure take place.[78] He has argued[79] that a domain name right as such is transferable as a property right. According to Tom Heremans, intangible moveable property can be pledged under Belgian law if the intangible moveable property is transferable. Since domain name rights are 'transferable', Tom Heremans reasons, a right of pledge can be vested.[80] It is questioned whether a contract renewal can be considered to be a 'transfer' as such; in my opinion, it cannot.[81] In order for the pledge to be successful, under Belgian law, the pledgee has to take possession of the intangible moveable property. As the possession of intangibles is considered impossible, Belgian law has introduced a fictional possession of claims, according to Tom Heremans.[82] In his view domain name rights cannot be considered to be claims in this respect, therefore that rule cannot justify a right of pledge on domain name rights.[83] As for the seizure of domain name rights, Tom Heremans argues that domain name rights as intangible property rights should in principle be seizable, but that there are no statutory provisions under which the domain name rights can actually be attached.[84]

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77 It should be noted that per 1 January 2018, Belgium has changed the law on the right of pledge. Some provisions to which Belgium literature refers to, are no longer in force, such as Art. 2017, para. 2 Belgium Civil Code.

78 T. Heremans, *Domeinnamen*, nos 70-79 and nos 80-88; cf. also J. Malekzadem, *Rechtskundig Weekblad* 2009, pp 1498-1506.

79 T. Heremans, *Domeinnamen*, nos 65-69.

80 T. Heremans, *Domeinnamen*, no. 74.

81 As indicated above, Tom Heremans implicitly acknowledges this, as he correctly notices that the use of domain name rights depends on the fulfilment of contractual requirements, such as payment and the non-infringement of trademarks, and that DNS Belgium uses a contract renewal to establish the transfer. In my opinion, this contradicts his qualification of a domain name right as a 'transferable' property right.

82 T. Heremans, *Domeinnamen*, no. 77.

83 In my view, the right to the continuous use of the domain name could be considered a claim, although not a monetary claim. As discussed above, a right of pledge on a claim presupposes that the claim can be collected and that a right of pledge can be vested on the collected proceeds, which is neither the case with such a claim.

84 T. Heremans, *Domeinnamen*, nos 80-82, reviewing several statutory provisions.

4.4. Germany

27. In 2005, the German BGH[85] ruled that, according to German law,[86] an internet domain name as such cannot be pledged, but the contractual rights of the domain name holder vis-à-vis DENIC or another provider can, which comes down to the pledge of a claim vis-à-vis DENIC for the use of the domain name as 'other property rights' than, for example, tangible moveable or monetary claims. The BGH also ruled that the domain name right is not an absolute right, but only a bundle of contractual rights to make technical use of a domain name. The contractual rights cannot be pledged as such (separately); the pledge of the main right to use the domain name encompasses the pledge of related contract rights. The pledge can be executed through the transfer of the domain name right. The BGH does not spell out how this relates to the foreclosure of the domain name right through contract renewal, for which the cooperation of DENIC is required and encompasses more than what has been pledged.[87] The BGH judgment on the qualification of a domain name right is similar to the opinion of the ECHR (discussed below), which also departs from the notion of a domain name right as a bundle of contract rights, rather than a single claim.

28. In the same year as the BGH decision, Cornelia Birner's dissertation on the domain name right as the object of recourse and in insolvency the similar topic was published.[88] In her dissertation, Cornelia Birner argues that the pledge of domain name rights can take place according to a special provision in the *Zivilprozessordnung* (ZPO) regarding 'other property rights'.[89] She considers a domain name right to be the bundle of rights arising from the contract with the registry, the DENIC. Cornelia Birner constructs the pledge of these rights through the pledge of the main right of the domain name holders against the DENIC, followed by the pledge of the other related, accessory rights of the domain name holder. Insofar as the GTCs encompass a prohibition on the transfer of the claim of the domain name holder against the DENIC through party agreement,[90] which would stand in the way of a pledge,[91] she argues that despite this, such a claim can nevertheless be pledged.[92] As for domain names as security rights, German legal

85 BGH 5 July 2005, VII ZB 5/05, *JurPC Web-Dok.* 2005(110), abs. 1-16. See extensively on the pledge of domain name rights, before the BGH-decision, C. Birner, *Die Internet-Domain als Vermögensrecht*, Ch. 2; Stephan Welzel, 3. *MMR* 2001. Cf. LG München I 12 February 2001 – Az. 20 T 19368/00; Bundesfinanzhof (BFH) 20 June 2017, VII R 27/15, ECLI:DE:BFH:2017:U.200617.VIIR27.15.0.

86 § 857, para 1 ZPO (*Zivilprozessordnung*).

87 Cf. on this issue, C. Birner, *Die Internet-Domain als Vermögensrecht*, pp 77-79.

88 See C. Birner, *Die Internet-Domain als Vermögensrecht.*

89 § 857 ZPO. See C. Birner, *Die Internet-Domain als Vermögensrecht*, Ch. 4.

90 § 398, para. 2 *Bürgerliches Gesetzbuch* (German Civil Code or BGB).

91 § 851, para. 1 ZPO.

92 See C. Birner, *Die Internet-Domain als Vermögensrecht*, Ch. 2.

doctrine also refers to the security transfer of domain name rights,[93] which could solve questions on the applicable pledge provisions. Although mostly positive, in current legal doctrine it is not undisputed whether domain name rights can be pledged.[94]

29. As for the foreclosure of the claim, for example after the seizure of the domain name right, Cornelia Birner argues that the claim should not be collected (as with monetary claims),[95] but by order of the court foreclosed 'in a different way'.[96] This different way could incorporate the transfer of the domain name right by means of a contract renewal. Despite (or due to) the profound, yet often complex analysis, it is made clear that the incorporation of domain name rights in German law is not self-evident and would have been served by tailor-made legislation, for example in line with her suggestions.

4.5. European Court of Human Rights

30. Although not conclusive for the Member States of the European Convention on Human Rights, it is worth noting the Paeffgen GmbH v. Germany[97] case in which the ECHR ruled that a domain name right is a 'possession' within the meaning of Article 1 of Protocol No 1. The ECHR recalls in its decision that 'the concept of 'possessions' referred to in this article has an autonomous meaning which is not limited to ownership of physical goods and is independent from the classification in domestic law.' The Court considers that 'the contracts with the registration authority gave the applicant company, in exchange for paying the

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93 See Schimansky, Bunte & Lwowski, *Bankrechts-Handbuch*, § 93. Pfandrechte, Rn. 200, referring for transferability to Lwowski/Dahm WM 01, 1135 et seq. Such a security transfer is forbidden in the Netherlands pursuant to Art. 3:84, para. 3 Dutch BW.

94 See e.g. Schimansky, Bunte & Lwowski, *Bankrechts-Handbuch*, § 93. Pfandrechte, Rn. 200, referring, concerning transferability, to Lwowski/Dahm WM 01, 1135 et seq.; and pledge, Thomas Schafft, *BB* 2006 Heft 19, 1013, 1016; Prütting, Wegen & Weinreich, *BGB Kommentar*, BGB § 1274 – VII. Immaterialgüterrechte, Rz. 26, stating that it is disputed whether domain names can be pledged (case law positive: OLG München Urt. v. 8.7.2004 K&R 04, 496; LG Essen Rpfleger 00, 168 [LG Essen 22.09.1999 – 11 T 370/99]; LG Ddorf CR 01, 468; LG Mönchengladbach MDR 05, 118; case law negative: LG München CR 01, 342, 343; BGH NJW 05, 3353 m Anm Beyerlein EWiR 05, 811, [BGH 05 July 2005 – VII ZB 5/05]. See positive, Stephan Welzel, 3. *MMR* 2001.

95 § 835, para. 1 ZPO.

96 § 844, para. 1 ZPO.

97 See ECHR 18 September 2007 (*Paeffgen GmbH/Germany*), nos. 25379/04, 21688/05, 21722/05 and 21770/05. Cf. on this decision Th. Revet, 'Propriété et droits réels' (Chroniques), Revue trimestrielle de droit civil 2008, p 503–507 with further references for French law. See on Art. 1 EP, EVRM o.a. V. Sagaert, 'De verworvenheden van het Europese goederenrecht', in A.S. Hartkamp et al. (eds), *De invloed van het Europese recht op het Nederlandse privaatrecht, Algemeen deel* (Kluwer: Deventer 2007), pp 301–333, with further literature and case law references.

domain fees, an open-ended right to use or transfer the domains registered in its name. As a consequence, the applicant could offer to all internet users entering the domain name in question, for example, advertisements, information or services, possibly in exchange for money, or could sell the right to use the domain to a third party. The exclusive right to use the domains in question thus had an economic value. Having regard to the above criteria, this right therefore constituted a 'possession', which the court decisions prohibiting the use of the domains interfered with.' According to the ECHR, the 'possessions at issue in the present case were not tangible, physical assets [...], but a contractual right to the exclusive use of domain names.'[98] The ECHR did not discuss the transfer, pledge or seizure of domain name rights.

4.6. The United States

31. In the United States, there has been a relatively great deal of case law on domain name rights compared to Europe.[99] Decisions vary mainly between those where the courts treat it as a services contract or a contractual position, as discussed above,[100] and decisions where the courts treat a domain name right as an intangible property right, as discussed here. In 2003, the Court of Appeals for the Ninth Circuit determined in *Kremen v. Cohen*[101] that a domain name is a form of intangible personal property, in a tort (fraud) case which involved the domain name 'sex.com'. The court used a three-part test to determine whether something is a property interest. Accordingly, there must be (1) an interest capable of a precise definition, (2) it must be capable of exclusive control, and (3) the alleged owner must have established a legitimate claim to exclusivity. The court held that internet domain names satisfy all property rights criteria because (1) a domain registrant decides where on the internet those who invoke that particular name are sent, (2) ownership is

98 However, according to the ECHR, the German government could impose a 'prohibition on using or disposing of the domains, which did not entail a transfer of the applicant's rights under the domain contracts, clearly served to control the use of its property within the meaning of the second paragraph of Art. 1 Protocol No. 1, ECHR. By contrast, the applicant's duty to apply with the registration authority for a cancellation of these domains [to prevent that company from continuing to violate third parties' trademarks rights or other rights under the Trademark Act and/or the German Civil Code] entailed a loss of its legal position under these contracts.'

99 This may be due to different state law. As for security interests, most states have adopted, although in sometimes different ways, the Uniform Commercial Code (UCC).

100 Cf. for example, *Dorer v. Arel*, 60 F. Supp. 2d 558 (E.D. Va. 1999); *Zurakov v. Register.com*, Inc., 304 A.D.2d 176, 760 N.Y.S.2d 13 (1st Dep't 2003); and *Network Solutions, Inc. v. Umbro International, Inc.*, 259 Va. 759, 529 S.E.2d 80 (Va. 2000); *Palacio Del Mar Homeowners Ass'n v. McMahon*, 95 Cal. Rptr. 3d 445, 449 (Ct. App. 2009).

101 *Kremen v. Cohen*, 337 F.3d 1024, 1033–1034 (9th Cir 2003). Cf. Warren E. Agin, 14. *J. Bankr. L. & Prac.* 2005(3).

exclusive because the registrant alone makes that decision, and (3) registering a domain name informs others that the domain name is the registrant's and no one else's. Following Kremen v. Cohen, other courts have since held that a domain name is an intangible property right.[102] This view would have been impliedly adopted by Congress when it passed the Anticybersquatting Consumer Protection Act (ACPA) in 1999.

32. Most legal scholars, such as James Nehf, Warren Agin, Juliet Moringiello and Thao Nguyen, seem to favour this approach, because it allows for security interests to be granted under Article 9 UCC and for seizing or garnishing domain name rights.[103] Yet, legal scholars also notice the real or potential conflict with jurisdictions where domain name rights are judicially characterized as 'contract rights' or 'service contracts' based on the legal relationship between the registry and the domain name holder, and/or try to reconcile both views, such as Frederick Abbott[104] and James Nehf.[105] Within the intangible property rights approach, legal scholars point to difficulties related to a contract renewal and the cooperation of the registry, which are required for the execution of the domain name right.[106]

33. Concluding, although the predominant view seems to have emerged in the U.S. since 2005 that domain names are a form of intangible personal property separate from, or in addition to, the contractual rights that arise from the service agreement with the domain name registrar, case law is divided and there is a considerable amount of legal uncertainty due to classification issues relating to the nature of the

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102 Cf. *Harrods, Ltd. v. Sixty Internet Domain Names*, 302 F.3d 214 (4th Cir. 2002); *Caesars World, Inc. v. Caesars-Palace.Com*, 112 F. Supp. 2d 502 (E.D. Va. 2000); In re *Larry Koenig & Assoc.*, 2004 WL 3244582 (Bankr. M.D. La. 2004) (slip opinion); *Office Depot v. Zuccarini*, 596 F.3d 696, 701-02 (9th Cir. 2010); *CRS Recovery, Inc. v. Laxton*, 600 F.3d 1138 (9th Cr. 2010); *Media Lab, Inc. v. Collis* 2010 U,S. Dist. LEXIS 104407 (N.D. Cal. 30 September 2010).

103 Cf. James P. Nehf, *SSRN Paper ID 2756189, code 55981*; Warren E. Agin, 14. *J. Bankr. L. & Prac.* 2005, p 3; Juliet M. Moringiello, 72. *U. Cinn. L.R.* Fall 2003, p 95; Thao N. Nguyen, 10. *Geo. Mason L. Rev.* 2001, p 183, 184.

104 Frederick Abbott tries to reconcile the opposing views (as taken in Network Solutions v. Umbro and Kremen v. Cohen), but does not do so in a convincing manner by reframing a contract renewal as a transfer of a property right under the conditional acceptance of obligations. He states that 'there is nothing unique about attaching conditions to the transfer of intangible property', but overlooks that transferring a contract with rights and obligations is not similar to the transfer of those right attaching the fulfilment of those obligations as a condition to such a transfer. Frederick M. Abbott, 3. *Journal of Intellectual Property and Entertainment Law* 2013, pp (1-52) at 1.

105 Nehf argues that, for the purposes of Art. 9 UCC, it does not matter whether domain name rights are categorized as contract rights or as intangible property, as in both cases they will be viewed as part of the catch-all 'general intangibles' category for Art. 9 UCC purposes. Cf. James P. Nehf, *SSRN Paper ID 2756189, code 55981*, p (1) at 25.

106 Cf. James P. Nehf, *SSRN Paper ID 2756189, code 55981*; Juliet M. Moringiello, 72. *U. Cinn. L.R.* Fall 2003 p 95.

internet domain name rights.[107] To circumvent this legal uncertainty, in practice lenders use security transfers.[108]

5. Some Notes on No-assignment Clauses in Relation to Pledge and Seizure

34. The prescribed way of a contract renewal for the transfer of domain name rights can in my view effectively be interpreted[109] as a no-assignment clause, which prohibits the assignment or pledge of any claims as such.[110] If such a clause would have no proprietary effect, the domain name holder would still be liable for a breach of contract, risking the registration of the domain name right as such. One could also argue that a contract right for the use of a domain name right is not transferable due to its very own nature, as, apparently, the person of the creditor (the domain name holder) is relevant to the debtor (the registry).[111] If the assignment of the domain name right as such or a forced sale of the domain name right after pledge or seizure as such though assignment would be possible despite the prescribed manner of a contract renewal,[112] this would lead to the odd situation where the duty of care and other obligations (such as the payment obligation) remain with the 'old' (former) domain name holders, still being a party to the service contract, without the contractual right to use the domain name, which would be assigned to a third person. Some German legal scholars consider the requirement of registration as an extra contractual requirement for the assignability of the contractual rights (claim) against the DENIC (§ 399 (2) of the German Civil Code).[113] That view, however, does not address the fact that the DENIC requires the new domain name holder to enter into a

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107 James P. Nehf, *SSRN Paper ID 2756189, code 55981.* Legal uncertainty is also reflected by legal practice. Cf. www.nylitigationfirm.com/the-domain-name-as-collateral/; www.eversheds-sutherland.com/global/en/what/articles/index.page?ArticleID=en/tmt/Domain_name_IP_Feb2015.

108 Warren E. Agin, 19. *Business Law Today* 2008(1), p 22. Security transfers are forbidden according to Dutch law, Art. 3:84, para. 3 Dutch BW.

109 According to Dutch law, cf. Dutch Supreme Court 21 March 2014, ECLI:NL:HR:2014:682, *NJ* 2015/167, *JOR* 2014/151 (Coface/Intergamma).

110 Within the meaning of Art. 3:83, para. 2 in conjunction with Art. 3:98 Dutch BW by virtue of a stipulation by the parties.

111 Cf. Art. 1, para. 5 SIDN GTC, which provides that the SIDN may decline a particular (legal) person as a domain name holder, for example if he failed to meet his obligations towards the SIDN in the past.

112 In some jurisdictions, no-assignment clauses are ineffective. Generally, this would rather involve no-assignment clauses related to monetary trade receivables. See for example, Art. 354*a*, para. 1, German *Handelsgesetzbuch* (HGB); Art. L442-6-II Code de commerce (France); and the proposed Art. 3:94, para. 5 Dutch BW. Such monetary trade receivables are very different from rights to the continuous use of domain names or the leasing of property.

113 MüKoBGB/*Damrau*, 7. Aufl. 2017, § 1274 Rn. 14 & 88 on (i) Pledge of Internet Domain Names ('Verpfändung von Internet-Domain-Namen'), with further references.

new contract, which rules out the possibility of an assignment of a claim in the first place and ignores the liabilities and payment obligations that come with the domain name right.

6. Domain Name Rights Are Not Intellectual Property Rights or 'Absolute Rights'

35. Domain name rights are generally not considered to be intellectual property rights or absolute rights. In its 2005 decision the German BGH explicitly rejected the view that a domain name (right) is an intellectual property right.[114] Most authors agree that domain name rights are not intellectual property rights if no explicit statutory basis for this exists. In the Netherlands, Belgium, Germany and the United States there is no such legal basis, and therefore this category of property rights is not an option under the current law in those countries. Only in some cases have the lower courts considered domain name rights to be tangible property.[115] Similarly, in the Netherlands, Freerk Falkena, Karsten Gilhuis and Wolter Wefers Bettink[116] have argued that domain name rights are absolute rights, and Arine van der Steur, referring to the law of trademarks, has argued that domain name rights are not rights which have to be exercised against one or more persons, expressing a preference for a statutory regulation of domain name rights as intellectual property rights. [117] In Belgium, Tom Heremans investigated statutory rules on the pledging of patent rights and trade rights under Belgian law, which could apply by analogy to domain name rights, however concluding that pledging domain name rights may be possible, but that the lack of a statutory provision to this effect leads to legal uncertainty.[118] Jasmine Malekzadem takes a different view and argues that a domain name right should be considered to be an intellectual property right, which can be attached according to the rules for moveable property.[119] In the U.S., among others, Abbot has pointed out that domain names share certain characteristics with various forms of intellectual property,

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114 BGH 5 July 2005, VII ZB 5/05, JurPC Web-Dok. 110/2005, abs. 1-16. See extensively on the pledging of domain name rights, before the BGH decision, C. Birner, *Die Internet-Domain als Vermögensrecht*, Ch. 2; Stephan Welzel, 3. *MMR* 2001. Cf. LG München I 12 February 2001 - Az. 20 T 19368/00; Bundesfinanzhof (BFH) 20 June 2017, VII R 27/15, ECLI:DE:BFH:2017:U.200617.VIIR27.15.0.

115 *In re* Paige, 413 B.R. 882 (Bankr. D. Utah 2009). Cf. James P. Nehf, *SSRN Paper ID 2756189, code 55981*, p 15-17 for a discussion of some additional cases.

116 F.B. Falkena, K. Gilhuis & H.W. Wefers Bettink, 'De domeinnaam in het civiele recht', *NJB* 2001, pp 841-848 and cf. p 1616.

117 J.C. van der Steur, *Grenzen van rechtsobjecten* (Deventer: Kluwer 2003), para. 282-284.

118 T. Heremans, *Domeinnamen*, no. 78-79.

119 J. Malekzadem, *Rechtskundig Weekblad* 2009, p 1498-1506.

but do not fall neatly within 'traditional' categories.[120] Although domain name rights are not recognized as intellectual property rights, they are to some extent comparable to trade mark and patent rights (which also require registration and payment to retain registration).[121] Qualification as such would require legislation, but would solve many of the problems at hand.

7. Contractual Arrangement for Pledge, Seizure and Forced Sale: The Case of the Netherlands

36. The question remains whether a bottom-up self-regulation contractual model could solve the legal uncertainty as described. An extreme example of such self-regulation through contract law can be found in the Netherlands, where the SIDN has provided for the possibility of a 'pledge' and 'seizure' with its own rules.[122]

37. According to the SIDN's GTCs[123] and its website, the pledging of a domain name right is possible. It requires either an authentic (notarial) deed or a registered private deed, as well as the registration of the pledge in the SIDN's registry through a notification of the pledge in conformity with the requirements set by the SIDN. According to the SIDN, the consequences of such a disclosed pledge are that both the change of the domain name holder and the termination of the registration by the domain name holder shall require the pledgee's *written consent.* If the SIDN wishes to terminate the registration because the domain name holder does not meet his obligations, the SIDN offers the pledgee the opportunity to take over the registration during a thirty-day period. From the SIDN GTCs it seems to follow[124] that the forced sale of the domain name right is to be realized through a contract renewal. The provisions, both on the requirements for and the legal consequences of the 'right of pledge', contradict the mandatory statutory provisions in the Dutch

120 Frederick M. Abbott, 3. *Journal of Intellectual Property and Entertainment Law* 2013, p (1) at 13 ff., and 23: 'The situation of domain names is not dissimilar from some other forms of intellectual property, such as the patent. Once a patent is registered with the national patent office, that office may not cancel (for example, invalidate) the patent absent some defect or dereliction on the part of the patent holder. Indeed, the patent only exists because it is granted by the patent office. But, the granted patent is regulated by rules superior to those of the patent office that are established by the national legislature.78 It is because of these superior rules that the patent is often referred to as a form of property, even though it is only a form of legislated 'temporary property' because it is defined by a term of years. It expires.' Cf. J.W.A. Biemans, *NTBR* 2009, fn. 16.

121 Cf. J.W.A. Biemans, *NTBR* 2009, fn. 16; Frederick M. Abbott, 3. *Journal of Intellectual Property and Entertainment Law* Fall 2013, p (1) at 23 and 1.

122 Referring to this contractual arrangement, Heremans has sketched a similar procedure under Belgian law. T. Heremans, *Domeinnamen*, nos 85–88.

123 Cf. expressly Art. 14 CT.

124 Art. 16, para. 1, sub k of the SIDN's GTCs states that the SIDN can unilaterally terminate the contract in cases of the forced sale of a domain name.

BW. For example,[125] the right of pledge seems to be in conformity with the statutory rules on rights of pledge on a claim or receivables. However, it is not clear whether the right of pledge is disclosed or undisclosed,[126] as the requirements described by the SIDN are a combination of both. Also, the possibility for the pledgee to take over the domain name right is contrary to the prohibition of appropriation by a pledgee.[127] Last, the pledgee has the power to take over the domain name if the pledgor (the domain name holder) is in default vis-à-vis the SIDN, without any requirement that the pledgor is also in default *vis-à-vis* the pledgee, which contradicts foreclosure requirements.[128]

38. The SIDN is also of the opinion that a seizure is possible. According to the SIDN it should be made in conformity with Article 474bb Dutch RV.[129] The legal consequences of such an attachment or seizure are the same as those of a pledge, according to the SIDN's information.[130] Both a change and a termination by the domain name holder are only possible with the seizing creditor's written consent. In the case of the 'termination of a seized registration' by the SIDN, the creditor has the opportunity to take over the registration of the domain name holder during a thirty-day period. All three cases do not require that in proceedings by the creditor against the domain name holder, the court must have ruled in favour of the former, which contradicts the mandatory statutory rules. A court's order for a (provisional) seizure (*conservatoir beslag*) suffices. The proposed seizure also poses other, similar problems as with the pledging of domain name rights and ignores several statutory distinctions, requirements and mandatory provisions.

39. In my opinion, the basis for the special requirements for pledging and seizing domain name rights and special powers of the pledgee and creditor should not be sought in the statutory provisions on pledge and seizure, as these do not provide a basis, but in the agreement between the SIDN and the domain name holder, whereby the powers of the 'pledgee', the 'bailiff' and the 'creditor' may best be interpreted as a third-party stipulation for the benefit of any person who can submit

125 For more examples, J.W.A. Biemans, *NTBR* 2009, para. 5.

126 Art. 3:83, para. 1 Dutch BW (transferability); Art. 3:84, para. 1 in conjunction with Art. 3:94, para. 1 or 3 Dutch BW (transfer, para. 1: disclosed or para. 3: undisclosed assignment); Art. 3:84, para. 1 in conjunction with Art. 3:94, para. 1 in conjunction with Art. 3:98/3:236, para. 2 Dutch BW (disclosed pledge); Art. 3:84, para. 1 in conjunction with Art. 3:239, para. 1 in conjunction with Art. 3:98 Dutch BW (undisclosed pledge); Art. 475 ff. Dutch RV (seizure, attachment).

127 Art. 3:235 Dutch BW, which provides that any stipulation whereby the pledgee or mortgagee is given the power to appropriate the secured property, shall be null and void.

128 Art. 3:248 Dutch BW.

129 Cf. Art. 14 GTC.

130 See www.sidn.nl and Art. 20 GTC.

leave for seizure to the SIDN regarding a domain name right.[131] In reality, the 'pledge' and 'seizure' as described by the SIDN are a sophisticated contractual arrangement for the benefit of third parties, the creditors of the domain name holder, but not an elaboration of the statutory rules in the Dutch BW or the Dutch RV. The provisions will not hold in, for example, a bankruptcy of the domain name holder.

8. Limits of Contract Law; Proposal for a New Approach

40. The (service) contract, including the GTCs, between the registry and a domain name holders may perfectly define their relationship and even arrange for a mode of the 'transfer' of domain name rights, but contract law has its limitations when it comes to the pledging and seizure of domain name rights, as shown by the SIDN contractual arrangement. Moreover, the prescribed means of a 'transfer' through a contract renewal is understandable from the point of view of the registry, as the domain name right does not only consist of rights, but also of obligations. This holds true for the required consent of the registry through the contract renewal, as in some cases the registry may object to the person of the new domain name holder and may want to withhold such consent. However, such a 'transfer' cannot be equated with normal transfers of property rights. The relationship and mode of transfer pose problems when it comes to the pledging, seizure and forced sale of domain name rights, as existing statutory rules proceed from the notion of 'classic' property rights, as opposed to contractual relationships.

41. The various attempts in various jurisdictions by legal scholars and courts to squeeze domain name rights into existing statutory rules, as demonstrated above, have resulted in a discussion in the past twenty years over the legal nature of domain name rights, which has not resulted in the desired legal certainty. As domain name rights should be the object of security interest and should be available for seizure by creditors, legislators should make tailor-made statutory rules, instead of leaving the issue at hand to the courts, legal scholars and registries. Bottom-up self-regulation of domain name rights through contract law has been useful to a great extent, but has failed when it comes to pledge, seizure and forced sale.

42. If legislators do not make the domain name right an intellectual property right, but consider the domain name right as a service contract, they should provide for a statutory rule that regulates forced sale through contract renewal, explicitly stating that the buyer not only acquires the contractual right to use the domain name, but (also) the service contract as a whole,

131 Cf. J.W.A. Biemans, *NTBR* 2009, para. 7.

including all rights and obligations. This rule should regulate the involuntary transfer of the domain name right in the case of a forced sale,[132] or, better, acknowledging the registry's permission requirement in the process of a forced sale, demanding in such cases that a registry cannot withhold its consent to such a 'transfer' on unreasonable grounds. The registry would unreasonably withhold its consent if the person of the buyer of the domain name right is of no issue. Within such a new regulation, pledge and seizure are not restricted to a (contractual) property right as such, but deal with the service contract as a whole. The statutory rule could have a broader scope and include the pledging, seizure and forced sale of similar long-term contracts granting the right to the continuous use of other items as well, such as rental and licensing agreements.[133]

9. What can We Learn from Domain Name Rights for Blockchain Rights?

43. If the most significant technical innovation of the last twenty-five years has been the internet, the most significant one of the last five years has been blockchain technology as first introduced by the bitcoin.[134] Just as internet and domain names, blockchain and cryptocurrencies are designed for its users and by lawyers for our needs. Just as internet and domain names, one of the most important features of the blockchain is its 'deregulation' and its relative lack of government regulation so far. Yet, also this innovation will demand a response from the law. This also holds true for the pledge and seizure of cryptocurrencies. In the Netherlands, attempts have been made to attach bitcoins.[135] It goes without saying

132 Cf. Juliet M. Moringiello, 72. *U. Cinn. L.R.* Fall 2003, p 95, para. VI. Cf. also Art. XX.87, para. 3 of the Belgian WER.

133 Cf. J.W.A. Biemans, *NTBR* 2009, para. 7.

134 See on blockchain and the law, P. De Filippi & A. Wright, *Blockchain and the Law* (Cambridge: Harvard University Press 2018); J. Bacon, J.D. Michels, C. Millard & J. Singh, 'Blockchain Demystified', *Queen Mary School of Law Legal Studies Research Paper No. 268/2017* at ssrn.com/abstract=3091218; P. Paech, 'The Governance of Blockchain Financial Networks', 80. *Modern Law Review* 2017, p 1072–1100, C.L. Reyes, 'Conceptualizing Cryptolaw', 96. *Nebraska Law Review* 2017, p 384–445; and J. Dax Hansen & Joshua L. Boehm, 'Treatment of Blockchain Under U.S. Property Law' (March 2017), www.virtualcurrencyreport.com/wp-content/uploads/sites/13/2017/03/2016_ALL_Property-Law-Bitcoin_onesheet.pdf. For Dutch law, T.F.E. Tjong Tjin Tai, 'Smart contracts en het recht', *NJB* 2017(146), pp 176–182, T.F.E. Tjong Tjin Tai, 'Juridische aspecten van blockchain en smart contracts', *TPR* 2017, pp 563–608, C. Prins, 'De Blockchain: uitdaging voor het recht', *NJB* 2016(1941); J. Linneman, 'Juridische aspecten van (toepassingen van) blockchain', *Computerrecht* 2016(218), pp 319–324; and the special issue *Computerrecht* December 2017 (nos. 249–254).

135 See M. Bernardt & J.D. van Vlastuin, 'De executie van bitcoins', *De gerechtsdeurwaarder* 2015(1), pp 24–26; M.J.W. van Ingen & W.J. Smits, 'Beslag op bitcoin: (praktisch) onmogelijk?', *BER* 2018(2); and www.bvd-advocaten.nl/blogs/beslaglegging-op-bitcoins-kan-dat.

that similar qualification questions have come and will come up, also outside the domain of pledge and seizure.[136]

44. Although there are significant differences between domain name rights and bitcoins and other cryptocurrencies (or blockchain rights), these digital, international and cross-border innovations both do not fit within existing statutory rules.[137] Both systems, the domain name registration and the blockchain, provide for particular modes of 'transfer'; the domain name registration through contract law and the blockchain through technology. These modes of transfer differ significantly from the classic transfer of property rights. Just as contract renewal poses problems for the pledge, seizure and forced sale of domain name rights, it is foreseeable that a transfer through the blockchain poses similar legal problems for the pledge, seizure and forced sale of bitcoins and other cryptocurrencies. Whereas each domain name right has its registry, to which a notification of a pledge or seizure can be served, the (permissionless) blockchain does not have such a central authority. This asks for a different approach. Either the blockchain should be more sophisticated, incorporating the possibility of a pledge and seizure in its technology, or the law should provide for means to give a pledgee or creditor special rights to obtain the private key and/or to access the computer information.[138]

45. As far as bitcoins and other cryptocurrencies are concerned, we should not try – as has been done with domain name rights – to fit these innovations into existing statutory rules or bottom-up self-regulation, but should develop tailor-made statutory private law rules for pledging, seizure and the forced sale of these rights. The history of internet domain name rights shows that if the regulation of certain technological innovations is left to existing private law rules or contract law, it leaves too much room for debate and uncertainty for the (third) parties involved.

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136 District Court Amsterdam 14 February 2018, ECLI:NL:RBAMS:2018:869 (insolvency claim); District Court Overijssel 14 May 2014, ECLI:NL:RBOVE:2014:2667, *JOR* 2014(266); Court of Appeal Arnhem-Leeuwarden 31 May 2016, ECLI:NL:GHARL:2016:4219 (both on damages). Cf. W.F. Dammers, 'Bitcoins: een vreemde zaak?', *Tijdschrift voor Internetrecht* 2016, p 110-112; W.A.K. Rank, 'Betaling in bitcoins: geld of ruilmiddel, betaling of inbetalinggeving?', *Ars Aequi* 2015, p 177 et seq.; and V. Tweehuyzen, 'Goederenrechtelijk puzzelen met bitcoins', *Ars Aequi* 2018(7), pp 602-610. Opinion on virtual currencies (EBA/Op/2014/08); and ENISA Opinion Paper on Cryptocurrencies in the EU, 1 September 2017, at www.enisa.europa.eu.

137 They share the fact that they leave out intermediaries: the internet in sharing information, and blockchain and cryptocurrencies in payment.

138 Cf. J.W.A. Biemans, in S.J.W. van der Putten & M.R. van Zanten (eds), *Compendium Beslag- en executierecht*, p 575-579.