

INTELLECTUAL PROPERTY RIGHTS AND DIGITAL TRANSFORMATION IN ESTONIA – ASPECTS RELATED TO COPYRIGHT AND PATENT PROTECTION

Abstract

With almost all public services delivered online, functioning system of e-residency and established ‘data embassies,’ Estonia is also home to blooming creative community and numerous companies ranging from small start-ups to tech giants. Apart from being the result of a clear and long-lasting political orientation, this success is strongly correlated with Estonian legislation and, more narrowly, its regulatory framework on both information/digital society and protection of intellectual property rights (IPR). After examining the most relevant features of Estonia’s legislation related to digital economy and society (Chapter 2), this paper analyses the country’s regulatory framework on copyright (Chapter 3) and patents (Chapter 4) in the light of digital transformation. The author argues that there is a direct correlation between, on the one hand, regulatory framework dedicated to IPR protection on both EU and national level and, on the other, development of digital technologies. The study of Estonian legislation and practice in the field of copyright and patent protection has shown that, in numerous aspects, the country is largely dependent on the good functioning of wider EU legal and institutional framework, while, in the near future, the technological advance would require more supranational regulatory mechanisms.

Keywords: Estonia, intellectual property rights, digital transformation, copyright, patents.

1. Introduction

There is a large consensus in scientific, business and IT communities that the way Estonia has, until now, performed the digital transformation of its public and private sectors represents an undoubted success story. According to the centralised platform *e-estonia*, the country has built “an efficient, secure and transparent ecosystem where 99% of governmental services are online”, while the advantages of digitalisation were particularly observable in the context of the long-lasting crisis caused by the COVID-19 pandemic. At the moment, “all but three public services (marriage, divorce and real estate

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transactions) are securely delivered online” (Azzopardi *et al.*, 2020, p. 14) facilitating both the everyday life of Estonians and the functioning of country’s central and local public administration. The quasi-totality of Estonia’s surface (45.339 km²) is covered either by a free Wi-Fi signal (public transportation, administration, cultural and leisure venues) or by fast mobile internet. Moreover, the country is attractive not only for digital nomads, but also for big international companies and ICT start-ups (Ericsson, Skype, Monese, TransferWise, TeamDev). In any case, the digital transformation – phenomenon recently often referred to as ‘digital change’ (Iveroth & Hallencreutz, 2021) – considerably depends on the country’s legislation dedicated to the protection of intellectual property rights (IPR). After examining the most relevant features of Estonia’s legislation related to digital economy and society (Chapter 2), this paper analyses the country’s regulatory framework on copyright (Chapter 3) and patents (Chapter 4) in the light of digital transformation. The author argues that – independently of whichever possible value judgment of the very phenomenon of digital transformation and its societal consequences – there is a direct correlation between, on the one hand, general regulatory framework dedicated to IPR protection on EU and national level and, on the other, development of digital technologies.

In this paper, the author has opted for the notion of ‘digital transformation’ and not of ‘digital change’ for three main reasons. First, the term ‘transformation’ appropriately designates the deep societal changes stemming from the wider use of online platforms, cloud computing, artificial intelligence and other related phenomena. Second, the term ‘transformation’ is particularly adequate for a country such as Estonia, which has simultaneously gone through political and economic transition and societal changes brought about by the fourth industrial revolution. Third, the notion ‘digital change’ is too general and can be somewhat misleading.

2. The Main Features of Estonia’s Digital Transformation – Administrative and Legal Aspects

The digital transformation in Estonia is a well-established tendency, given that, according to some sources, it has already started in early/mid 90ies. A recent case study points out that the creation of the governmental *Department of State Information Systems (Riigi Infosüsteemide Osakond – RIO)* in 1993 was the first step in this direction, given that “all ministries’ and agencies’ IT development plans had to demand its approval” (Centre for Public Impact, e-Estonia, the information society since 1997, 2019). There is no doubt that the very act of creation of a central administrative authority such as the RIO stems from a clear political will to progressively establish a society based on cutting-edge information technologies. Moreover, there are two other important indicators confirming this assessment. First, the fact that, already from 1993, the majority of important entities belonging to the Estonian central administration were regularly elaborating IT development plans shows to which extent the idea of information society in the country was not only precocious – especially in comparison with many other

countries of Central and Eastern Europe – but also widely accepted as a societal and political choice. Second, the obligation of those central administrative entities to submit their IT development plans to the RIO for approval indicates the legislator's will to have a coordinated advance of country's technological transformation. Almost three decades from this first step, today Estonia is Europe's leading country¹ in digital public services; according to the latest European Union's *Digital Economy and Society Index* (DESI), Estonia is (before Spain and Denmark) the most successful EU Member State when it comes to the "demand and supply of e-government services [and] open data policies and implementation" (EU DESI Report, 2020, p. 17). However, even if they agree on Estonia's impressive results in digital transformation, some authors have a different approach to the reasons of country's achievements in this respect. Starting from the assessment that "it would be easy to assume that in such a small country these achievements spring from a common biotope of political ideas and actors" they affirm that Estonia's policymakers were "pushing visionary changes without anticipating all the challenges and risks involved upfront, an approach that sometimes results in unexpected learning, creativity and – in this case – success" (Kattel & Mergel, 2018, p. 5). Without pretending to argue about whether the policymakers and legislators were always successfully anticipating the risks and challenges, it seems unquestionable that Estonia's digital transformation is a result of a clear and long-lasting political orientation, widely accepted by the citizens, business community and civil society. Therefore, it is now worth examining how this political orientation was (and still is) articulated in country's legal acts.

In spite of a very clear orientation towards the establishment of functioning information society, in Estonia this issue hasn't been overregulated. As for the national legal acts adopted by the country's National Assembly, the most significant are the Electronic Communications Act and the Information Society Services Act (both adopted in 2004), while the Personal Data Protection Act (adopted in 2018 and entered into force in 2019) and, to some extent, the Media Services Act (adopted in 2013 and entered into force in 2014) contribute to the overall regulatory framework in this field. However, the special attention has to be dedicated to the Information Society Services Act (ISSA), given that it is one of the most important, trans-sectorial legal acts in Estonia contributing to the digital transformation.² Moreover, this act is of a particular importance for the functioning of country's business and creative community, most often the main beneficiaries of the various forms of IP protection (including patents, but also copyright and trademarks).

After its entry into force in July 2004, the ISSA has been, until now, amended at nine occasions, one of them being the consequence of the expiration of a transitional

¹ It is, however, worth noting that, according to the overall Digital Economy and Society Index, Estonia occupies the 7th place in the EU, well behind Finland, Sweden, Denmark, Netherlands, Malta and Ireland (*EU DESI Report 2020*). Moreover, together with Denmark and Luxembourg, Estonia shows a "relatively low progression in digitisation over the last five years, even though they remain amongst the well performing Member States in the overall DESI ranking" (*EU DESI Report 2020*, p. 14).

² The full text of this act is accessible on the website of the Estonian National Assembly (*Riigi Teataja*), both in Estonian and English: <https://www.riigiteataja.ee/en/eli/504112013008/consolide>, (26. 9. 2021).

period of seven years after the Estonia's accession to the EU in May 2004.³ The ISSA defines "information society services" as those "provided in the form of economic or professional activities at the direct request of a recipient of the services, without the parties being simultaneously present at the same location", and they can consist of "processing, storage or transmission of information by electronic means intended for the digital processing and storage of data" (Art. 2-1). Consisting of only 18 succinctly formulated articles – out of which some of the most detailed concern predominantly either issues mainly related to the international private law (Art. 3 on the application of the law in force in the place of business) or to the notification of the European Commission (Art. 4) – the ISSA defines the notion of 'commercial communication' and focalises on the issues of restricted liability and state supervision over compliance with its provisions. It is important to underscore that the law distinguishes between the following possible situations when the liability of service provider is more or less significantly restricted: 1) mere transmission of information provided by a recipient of the service in a public data communication network; 2) temporary storage of information in cache memory and 3) provision of (in technical terms, non-temporary) information storage services. The third of three above mentioned cases is particularly important for cloud computing, which, on its part, plays an increasingly important role in reducing regulatory barriers to relocation and facilitates the functioning of young innovative firms (Azzopardi *et al.*, 2020, p. 14).

Adoption of the latest version of the Estonian Personal Data Protection Act (PDPA), in force from 2019, is the consequence of the fact that the EU General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679) has taken effect in May 2018, while Article 63 of the EU Directive 2016/680 – more narrowly dedicated to the processing of personal data in criminal matters – obliges the Member States to transpose it by 6 May 2018. In early 2017, according to its own rules of good legislative practice (see Estonian Rules for Good Legislative Practice and Legislative Drafting), Estonian Government (its Ministry of Justice) has adopted the legislative intent related to implementation of the GDPR and transposition of the Directive 2016/680. This legislative intent has addressed a number of important issues (administrative fines, certification procedures, representation of data subjects) and in some aspects (age limit for the lawfulness of the processing of child's personal data) has opted for the most liberal approach allowed by EU legislation, setting the limit at 13 years of age (Salumaa-Lepik, Kerikmäe & Nisu, 2021, p. 29). This choice has been maintained throughout the process of the adoption of the PDPA, given that its Art. 8-1 provides that "processing of the child's personal data is permitted only in the case the child is at least 13 years old". This example clearly shows that technology-friendly and e-oriented policy aimed to put digital transformation in practice often goes hand in hand with a more liberal approach to personal data protection.

³ It was the sixth time the text of the ISSA was amended and it entered into force on the date (1 January 2011) determined by the Decision of the Council of the European Union regarding the abrogation of the derogation established in respect of the Republic of Estonia on the basis provided for in Article 140 (2) of the Treaty on the Functioning of the European Union (Council Decision 2010/416/EU of 13 July 2010).

3. Some Major Challenges of Copyright Protection in the Digital Era – Estonian Legislation in the Context of EU Regulatory Framework

With its well established place in the system of IPR protection, the existing copyright legislation (on national, but also on EU and international level) is, in many ways, challenged by substantially new ways of creation, distribution (and/or sharing) and storage of various literary, artistic and other creative works. Well before the digital transformation has shown its potential we are witnessing now, some authors (Vaidhyathan, 2003) argued that the very existence of copyright legislation threatens creativity, while the other (Smiers & van Schijndel, 2009) were bent on elaborating the list of reasons why, according to them, the entire copyright system should be abolished. More moderate and less ideologised approaches to the entire set of legal provisions intended to protect human creativity are inclined to uphold that the existing copyright legislation is obsolete (Mancini, 2006), affirmation that is not only true, but progressively gains in actuality. The Estonian regulatory framework on copyright protection in the context of digitalisation will be analysed in a wider perspective of recent EU legislation on copyright in digital single market.

After long-lasting, laborious, often tense and highly mediatised negotiations, the EU Directive 2019/790 exclusively dedicated to the issue of copyright and related rights in the context of digitalisation was finally adopted in April 2019, while, according to its Article 29, the Member States (hereinafter: MS) were obliged to transpose it in their internal legal orders no later than 7 June 2021. The initial draft version of this act, elaborated by the European Commission in September 2016, has been so substantially modified⁴ that the inherent logic and structure of the initial text, as well as some truly innovative legal solutions, were diluted, mainly as a result of a political compromise reached under the pressure of different economic interests of authors, distributors and other operators. Moreover, the adoption of the Directive 2019/790 has given rise to heated value-centred debates and controversies, complicating the task of EU legislators. In any case, the result was the adoption of an act whose provisions are often imprecise and subject to various possible interpretations. Given that even a superficial analysis of the solutions brought about by the Directive 2019/790 would require significant space, in this chapter the focus will be on two important issues: online content-sharing and fair remuneration of authors and performers.

Digitalisation of various artistic, literary, scientific and other copyright-protected works significantly increased the possibilities for their (both licit and illicit) sharing, searching and storage, while numerous online content-sharing platforms are the major tool allowing the public access to these works. Article 17 of the Directive 2019/790, exclusively dedicated to this issue – apart from being the longest provision of the entire act – has introduced various obligations for the MS, whose objective is to achieve the approximation of national legislations in the EU's digital single market. Moreover, "given

⁴ The draft version of the Directive 2019/790 consisted of 24 articles, while, in September 2019, the European Parliament adopted not less than 86 amendments to its provisions; for the full text of adopted amendments, see <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2018-0337+0+-DOC+PDF+V0//EN>, (3. 10. 2021).

the cross-cutting nature of the law approximation policy” (Ćemalović, 2015, p. 246), the substantive provision of EU’s primary law representing the legal basis for the adoption of the Directive 2019/790 was Article 114 of the TFEU. The pillar of the normative structure of Directive’s provisions on online content-sharing service providers is the obligation of the MS to provide that, “when it gives the public access to copyright-protected works or other protected subject matter uploaded by its users” the service provider “performs an act of communication to the public or an act of making available to the public” (Art. 17-1, para. 1) of those works. This further allows obliging the provider to obtain the rightholder’s authorisation and regulate the issue of liability in the case of its absence. Unfortunately, excessively vague and general terms in which the Directive (Art. 17-4) defined the conditions under which a service provider shall not be considered liable for an unauthorised act of communication have considerably complicated the task of national legislators. It is not difficult to predict that the notions such as ‘best efforts,’ ‘high industrial standards’ and ‘relevant and necessary information’ may significantly vary from one MS to another, potentially undermining the functioning of Digital Single Market. As for Estonia, the country’s last amendments to the national Copyright Act have been adopted in June 2013,⁵ while, as of 1 September 2021, Estonia hasn’t communicated any national transposition measures to the European Parliament.⁶ However, the existing provisions of the Estonian Copyright Act already provide sufficient elements for its application to all online content-sharing providers, given that it covers “communication of the work [...] or direction of the work at the public by other technical devices” (Art. 13-9, dedicated to author’s economic rights and Art. 57-5, for contractual transfer of rights).

The need to establish a set of rules allowing the fair remuneration of authors and performers was one of the major points of contention during the process of adoption of the Directive 2019/790, and this act dedicates an important number of provisions to this issue (Art. 18-23). In principle, the Directive gives to the MS quite a large margin when it comes to the use of different mechanisms and national legal instruments in order to assure that authors/performers receive appropriate and proportionate remuneration for the exploitation of their works/other subject matter. However, as it was the case of previously discussed regulatory framework on online content-sharing platforms, in some important aspects, the provisions of the Directive often allow to the MS to reduce significantly the effects of the principle of fair remuneration. For example, transparency obligation introduced by EU legislation entitles authors/performers to receive “up to date, relevant and comprehensive information on the exploitation of their works and performances” (Art. 19-1). However, there are significant limitations to this principle. First, a MS may decide not to apply transparency obligation when the contribution of an author or performer is “not significant having regard to the overall work or performance” (Art. 19-4). Second, a MS may also provide that, in cases when the observation of transparency obligation would become a disproportionate

⁵ For more information on all modifications to Estonian Copyright Act, see <https://www.riigiteataja.ee/en/eli/525112013002/consolide>, (7. 10. 2021).

⁶ For all national transposition measures communicated until now, see <https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=celex:32019L0790>.

administrative burden for the licensee, this obligation is limited to certain types or scope of information. Third, the transparency rules within the framework of the existing collective bargaining agreements, in principle,⁷ remain applicable. As it was mentioned above, Estonia, until now, hasn't adopted national transposition measures of the Directive 2019/790, and national Copyright Act regulates the issue of author's right to remuneration (Art. 14) in general terms, without introducing any specific regulation related to the digital environment. However, national provisions specify that, in case of licensed audio-visual works, the author has a right to the right "to obtain equitable remuneration", but this obligation is limited only to the providers of television broadcasting services. Some recent decisions of Estonian national judicial instances (judgment of Tallinn District Court of 30 June 2020) have provoked a significant discontent of authors' associations and their appeal to the Supreme Court,⁸ showing that the issue of fair remuneration progressively gains in actuality in the context of intensified digital transformation.

4. Patent Protection and the Fourth Industrial Revolution – Estonian Legislation in International and European Perspective

The first major international arrangement aimed to ensure the protection of inventions has been adopted already in 1883 (Paris convention for the Protection of Industrial Property - PCPIP).⁹ Moreover, the Patent Cooperation Treaty (PCT, concluded in 1970, amended and/or modified in 1979, 1984 and 2001) with its 153 contracting states¹⁰ significantly facilitates the process of seeking patent protection internationally, allowing, *inter alia*, that inventors, by filing one international patent application, simultaneously seek patent protection in numerous other countries.

As for the European continent, a well-developed and relatively complex mechanism of patent protection, which also includes various administrative¹¹ and legal instruments for its implementation, has been established by the European Patent Convention (EPC, entered into force in 1977). The EPC represents a regional system for patent protection, allowing

⁷ Art. 19-6 of the Directive provides that "transparency rules of the relevant collective bargaining agreement are applicable" if they meet the transparency criteria provided for by the Directive (Art. 19, paras. 1-4). Given the general and often vague terms in which those transparency criteria are defined, it is difficult to imagine that, in the absence of a national act transposing the provisions of the Directive, an authorised national instance would nullify a collective bargaining agreement.

⁸ For an interesting overview of the developments that followed the adoption of the judgment of Tallinn District Court of 30 June 2020, see "Authors' associations dispute copyright compensation at Supreme Court", EER 5 August 2020, <https://news.err.ee/1120577/authors-associations-dispute-copyright-compensation-at-supreme-court> (13.10.2021).

⁹ For the full text of the Convention, in five official languages of the World Intellectual Property Organization, as amended on 28 September 1979, see <https://wipolex.wipo.int/en/treaties/textdetails/12633>.

¹⁰ For the full list of the signatories of the PCT, with the list of accessions and ratifications, see https://www.wipo.int/pct/en/pct_contracting_states.html.

¹¹ The most important administrative entity established by the EPC is the European Patent Office (EPOf), one of the two bodies of the European Patent Organisation (EPO).

covering (up to) 38 European countries¹² by a single patent application. On the other hand, the EU still has a lot of trouble to make operational its so-called 'patent package',¹³ allowing a European (EU) patent with unitary effect, as well as the establishment of a Unitary Patent Court (UPC). The recent ratification by Germany¹⁴ and Slovenia (September 2021) of the Protocol on the Provisional Application of the UPC Agreement¹⁵ gives some hope that the unitary patent protection on the EU level might be operational in the future.

Even a brief overview of the international and European legal instruments applicable to the patent protection clearly shows the presence of numerous, complex and often overlapping (Derclaye & Leistner, 2011) mechanisms for the protection of inventions. However, practically none of the above-mentioned acts (PCPIP, PCT, EPC, EU patent package) can be considered as sufficiently adapted to the realities of the fourth industrial revolution (known under abbreviations 4IR and Industry 4.0).¹⁶ In the same vein, demanding and long-lasting patent granting procedures are not adapted to the rapid technological development dictated by the 4IR, while "guaranteeing a reward for scientific effort and investment in research" (Čemalović & Petrović, 2015, p. 515) has become even more difficult in the context of a rapid digital transformation. Given the complexity of technological changes dictated by the 4IR and its multifaceted manifestations (robotics, 3D printing, cloud computing, Internet of Things, artificial intelligence), further considerations will focus on one of them: cloud computing. This choice is not arbitrary; Estonia is not only home to numerous cloud computing companies, but the country has also offered an e-residency to all interested individuals and established so-called 'data embassies', decisions highly dependent on cloud technologies.

With its outstanding and internationally recognized results in the functioning on the e-Government, the application of cloud computing (CC) in Estonian public sector and ICT development plans (Kotka & Liiv, 2015, p. 150) is already well developed. However, the CC related innovations in business sector depend more on the effective mechanisms of patent granting than on the successful functioning of the e-Government. The Estonian

¹² For the list of the member states of the European Patent Organisation, see <https://www.epo.org/about-us/foundation/member-states.html> (12. 10. 2021).

¹³ Unlike it is the case of the legal protection of trademarks and designs, in the EU there is still no operational unitary patent protection. For more information on EU unitary patent and, more generally, the entire 'patent package' see https://ec.europa.eu/growth/industry/policy/intellectual-property/patents/unitary-patent_en (12. 10. 2021).

¹⁴ The entire procedure that has led to the German ratification of the so-called PAP-Protocol (Protocol on the Provisional Application of the UPC Agreement) was lengthy and laborious. The ratification was also the subject of two demands (in 2017 and 2020) for preliminary injunctions before the German Constitutional Court, in which the claimants affirmed that the transfer of certain sovereign rights to the UPC would be contrary to the national Constitution.

¹⁵ The Agreement on a Unified Patent Court (OJ C 175 [2013], pp. 1-40) has been signed already in 2013, but it still hasn't been ratified by a sufficient number of EU member states.

¹⁶ Here we will not linger on the complex phenomenon of the 4IR and its numerous manifestations. It suffices to mention that the very notion of the Fourth Industrial Revolution has been made internationally known after Klaus Schwab (founder and director of the World Economic Forum), in 2016, published a book of this title. As for the expression 'Industry 4.0', it globally designates the same phenomenon, but it is particularly widespread in Germany (*Industrie 4.0*).

Patents Act (EPA) was initially adopted in 1994 (amended for the last time in 2011)¹⁷ and there is no doubt that it cannot comprise any provisions specifically adapted to the digital transformation and, more specifically, cloud computing. Moreover, the analysis of CC patent holders has shown that, for some important tech giants like IBM, “most of their cloud computing patents don’t have the phrase *cloud computing* in either the patent title, abstract or claims” (Liang, 2014, p. 3). Consequently, particularly important for the CC related inventions are the provisions of the EPA on criteria for patentability,¹⁸ and, more particularly, on novelty of an invention. Pursuant to Art. 8-2 of the EPA, “an invention is considered to be new if it does not form part of the state of the art”, while the provisions of both paras. 2 and 3 of Art. 8 further specify what the state of art comprises of and how it is determined. On the global level, the big expansion of CC related inventions took place between 2010 and 2013, when the number of granted patents in this field increased from 500 to 2,500 (Liu *et al.*, 2017, p. 80 (graph. 5.18)). In the similar vein, according to the statistical reports published regularly by the Estonian Patent Office (*Patendiamet*), number of filed patent applications during the last ten years varies from 23 in 2020 (*Patendiamet*, 2020) to 77 in 2011 (*Patendiamet*, 2011). Furthermore, over the entire period (2011-2020), the majority of applications (up to 90%) belonged to the category ‘non classified’ (according to the International Patent Classification), allowing the conclusion that they are related to so-called ‘network technology’ (Huang, 2016, p. 45). In any case, the combined analysis of, on the one hand, Estonian regulatory framework and national statistical data, and, on the other, major global tendencies in this field, lead us to three main conclusions. First, Estonian EPA has not recently been amended, but its provisions and national regulatory context in the field of digital transformation (see Chapter 2) are favourable for the inventive activity related to the 4IR. Second, CC-related patents applicants are, most often, seeking patent protection internationally; given the nature of cloud technology, it is predestined to be used in a cross-border (or, more precisely, meta-border) context. Third, Estonia is following a global tendency of stabilisation and decrease of patent applications in this field, showing that CC technology is not so new anymore, having a stabilised and well-developed state of the art.

5. Conclusion

With 99% of governmental services online, e-residency offered to interested foreign individuals and established so-called ‘data embassies’, Estonia has made some giant steps in digital transformation. This success is a result of a clear and long-lasting political orientation, widely accepted by the citizens, business community and civil society. Already from early/mid 90ies, the country started to adapt its public administration to the needs of information society, while the general legal framework (Electronic Communications Act, Information Society Services Act and, to some extent, Media Services Act) provided

¹⁷ For the full text of this act in English language, see <https://www.riigiteataja.ee/en/eli/511112013016/consolide>.

¹⁸ Due to the limited space, here we will not further discuss three conditions for patentability, which are, according to the wording used in the EPA, novelty, inventive step and susceptibility for industrial application.

a regulatory environment suitable for digital society. However, when it comes to the functioning of creative and business communities, the study of Estonia's legislation on two important aspects of IPRs (copyright and patent protection) has shown that, in numerous aspects, the country is largely dependent on the good functioning of wider regulatory and institutional framework in the EU. Still limited success in the establishment EU's digital single market, as well as often vague and general provisions of the Directive 2019/790, have a potential to further complicate the issues such as online content-sharing and fair remuneration of authors. When it comes to patent protection, the regulatory framework on international and EU level (PCPIP, PCT, EPC, and EU patent package) is not always sufficiently adapted to the realities of the 4IR. The study focalised on the issue of cloud technologies has shown that, in spite of globally satisfactory national legislation (EPA) in this field, Estonia is following a global tendency of stabilisation and decrease of cloud related patent applications. If stabilised and well-developed state of the art in the sector of cloud technologies can be an important element contributing to such decrease, there is no doubt that, in the near future, the 4IR would require more supranational regulatory mechanisms.

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PRAVA INTELEKTUALNE SVOJINE I DIGITALNA TRANSFORMACIJA U ESTONIJI – ASPEKTI VEZANI ZA AUTORSKOPRAVNU I PATENTNU ZAŠTITU

Sažetak

Sa javnom upravom koja je u stanju da gotovo sve usluge građanima pruži *online*, funkcionalnim sistemom e-prebivališta i uspostavljenim „ambasadama podataka“, Estonija je, takođe, država sa brzo rastućim kreativnim sektorom i sedište brojnih tehnoloških kompanija, počevši od malih *start-up*-ova, pa do informatičkih giganata. Pored toga što je rezultat jasne i dugotrajne političke orijentacije, ovaj uspeh je takođe u snažnoj vezi sa estonskim zakonodavstvom i, uže posmatrano, sa regulatornim okvirom koji se odnosi na informaciono/digitalno društvo i zaštitu prava intelektualne svojine. Pošto se osvrne na osnovne odlike zakonodavstva Estonije koje utiče na izgradnju digitalne ekonomije i društva (poglavlje 2), ovaj rad se fokusira na analizu regulatornog okvira posvećenog autorskom pravu (poglavlje 3) i patentima (poglavlje 4) u svetlu digitalne transformacije. Autor brani tezu da postoji direktna veza između, s jedne strane, opšteg regulatornog okvira posvećenog

zaštiti prava intelektualne svojine na nivou Evropske unije i na nacionalnom nivou i, s druge strane, uspeha u razvoju digitalnih tehnologija. Analiza estonskog zakonodavstva i prakse u oblasti autorskopravne i patentne zaštite je pokazala da je država u ovoj oblasti u velikoj meri zavisna od dobrog funkcionisanja regulatornog okvira na nivou Evropske unije, dok će, u bližoj budućnosti, tehnološki napredak zahtevati više nadnacionalnih regulatornih mehanizama.

Ključne reči: Estonija, prava intelektualne svojine, digitalna transformacija, autorsko pravo, patenti.

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