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Rights on Databases and Technological Measures – Topical Problems of the Information Society

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Abstract: *Technological measures entered into a mode of harmonization in the European legal space with Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society. In Art. 6, para. 3, these measures, in the field of intellectual property better known as technological protective measures (TPM), were expressly intended, including for the sui generis right provided for in Chapter III of Directive 96/9/EC. The following analysis considers the forms of manifestation, dynamics, harmonization issues, and bottlenecks in the application of technological measures to intellectual property objects with an emphasis on databases. A handful of selected examples from EU case law and technical literature help to make visible the conflict between the technological and the legal, and sometimes between them and the fair, the expected and the reasonable. Such examples are like labels that the reinforce feeling of that contradictory union that gave birth to the expression "L'union de l'aveugle et le paralytique." The analysis allows some conclusions, the aim of which is to contribute to the assessment of the effect of the application of the technological measures defined in the InfoSoc Directive, taking into account the nature and application of this protection, including on the digital databases rights in the current historical moment.*

1. INTRODUCTION

Technological development has made it possible for rights holders not to rely solely on the effectiveness of legal systems, but to independently protect their rights in a digital environment through various technical means. Their unreliability, however, brought them back to legal protection again with the idea of outlawing the "bad" technical measures that circumvent technical protection. Against the "good", who must be protected from the "bad".

2. ANALYSIS

Provided for the first time in Article 11 of the WIPO Copyright Treaty (in short WCT, adopted in Geneva on December 20, 1996, in force in 2002; protection of technological measures is also provided for in Article 18 of the WIP Performance and Phonograms Treaty (WPPT), adopted simultaneously with WCT) technological measures (TM) are defined by their aim. And it is: not to allow and limit actions concerning protected works for which permission is required from the rights holders. Which actions they restrict and how they restrict them is not made clear immediately. There were no provisions concerning them before in international conventions in the field of intellectual property. The EU implemented the texts of the WCT and WPPT in two directives after becoming a party to the treaty (see Council Decision of 16 March 2000 on the approval, on behalf of the European Community, of the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty, OJ L 89, 11.4.2000, p. 6–7). These are Directive 96/9/EC (Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, OJ L 77,

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27.3.1996, p. 20–28, known by its short name "The Database Directive") and Directive 2001/29/EC (Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society, OJ L 167, 22.6.2001, p. 10–19, known as the "The InfoSoc Directive"). The legal definition of TM in Article 6, paragraph 3 of The InfoSoc Directive gives some answers to the questions "which" and "how", after above in paragraph 1 of the same article obliges the member states to provide adequate legal protection against bypassing them. Thus copyright adds a non-legal, but legally guaranteed protection to its protective portfolio, similar to computer programs (Art. 7 of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, OJ L 122 , 17.5.1991, p. 42–46, obliges Member States to adopt appropriate measures against the unauthorized removal or disruption of technical devices used to protect a computer program). The result is nothing other than that physically hindrance to any electronic use of protected works in relation to their intended aim is considered lawful. It is necessary to emphasize that the given legal protection is for technological measures, as defined "for the purposes of this directive", and not some new type of legal protection of copyright and some other rights. That is, technological measures are subject to legal protection, but not all, but those defined in Article 6, Paragraph 3 of the InfoSoc Directive. In order for reflection on the subject to be useful, an analysis is needed to clarify the nature and content of this protection. It is it that would provide objective arguments in the unrelenting dispute, materializing the conflicting interests behind one or another claim about the limits of rights and freedoms in the field of intellectual property. The analysis of "legal protection" as a concept of the theory of law presupposes a complete clarification of its objective side as a system of legal norms establishing measures to protect the right and measures of responsibility for its violation. On the subjective side, it requires clarification of such elements of legal protection as subject, object, principles, method and mechanism of legal protection (Osipov, 2023). Such a complete analysis of the "legal protection" of TM in this article cannot be exhaustive. But even a small contribution is useful, given the modest amount, especially of current legal studies, in contrast to its disproportionately growing weight in the digital economy. Probably, in this picture approach of the European legislator has a certain role (the study mainly focuses on the European approach, but takes into account the global character of the problem). First of all, the chosen approach is regulation by directive, which obliges to a result without binding the national authorities with the ways to achieve it (Art. 288, §3 of the Treaty on the Functioning of the European Union). Second, the legal protection required by member states must be „adequate"; too general a prescription, limited by several guidelines found in the recitals to the directive (predominantly 47 et seq.). Such as those that legal protection should respect the principle of proportionality and not prohibit devices or activities that have a commercial purpose or application other than the circumvention of technical protection (recital 48 of the InfoSoc Directive; paragraph 30 of Case C-355/12, Nintendo and Others, ECLI:EU:C:2014:25); that it is possible for personal possession of devices, products or components designed to circumvent technical measures to be prohibited in national regulations (recital 49); that the protection of technological measures used in connection with computer programs (which are subject to another Directive, recital 50) is excluded from the subject scope; that their application should not harm public order or security (recital 51); that TM protection must ensure a secure environment for the offering of on-demand interactive services and public access to the works or other objects at a place and time independently chosen by the public; that in the case of provision of interactive on-demand services, contractual provisions derogate from (prevent the application of) national provisions for the protection of TM as opposed to non-interactive forms of online use (recital 53); that the legal protection of TM must be accompanied by a similar protection of the electronically presented rights management information (known as Digital Rights Management or DRM) relating to the protected subject matter (recitals 55 and 56); that the means of legal protection introduced by the national legislations must be

„effective", and for the sanctions, it is also required that they be „proportional and dissuasive" (recital 58), etc. Thirdly, for the understanding of TM in the present analysis, is relevant too that the InfoSoc Directive delimits the mandatory for the member countries from the non-mandatory exceptions, a comprehensive list of which is given in Art. 5, para. 2 of the Directive. This is an approach typical of the directives, where the discretion of the national legislator varies „from the very option to do something in the first place... to shaping the actual content of rights and rules..." (Rosati, 2021). "Thus, the legal nature of the technological measure is in general terms outlined as a subjective right of the holders of copyright, a related right, or a sui generis right (as provided in Chapter III of Directive 96/9/EC), to accompany to their own legally protected works with any effective technology or technologies that are objectively capable of preventing or restricting unauthorized actions or ensuring the enforcement of authorized actions in relation to these works, as well as to demand that others refrain from actions that circumvent these technologies if done with such intent. The expression "any technology" in the definition proposed by us characterizes a requirement for protection that is not explicitly enshrined in the law, namely: that it be technologically neutral. This also underlines the CJEU's understanding that the definition of effective technological measures in the Directive is "is defined broadly" (Case C-355/12, Nintendo and Others, ECLI:EU:C:2014:25, paragraph 27). The ability to require everyone else to refrain from circumventing them can give the impression of an exclusive (or absolute) right. In fact, it is not; it is not an independent right and its existence is a function of the above rights. It is not limited by time but is limited by the terms of protection of the respective rights. Nor does it presuppose the legal protection of said rights, which exist even if the holder chooses to ignore that protection (his considerations for which are irrelevant). Application of TM by rights holders is voluntary. Moreover, according to the Court of Justice of the European Union (CJEU, n.d.), non-application by the holder of TM rights, even if there is a possibility of the opposite, cannot lead to the loss of just compensation (CJEU decision on Joined Cases C-457/11 to C-460/11, ECLI:EU:C:2013:426, paragraph 57). The technological measures are implied for the digital use of the works. This is also clear from the aim of the Directive to provide a normative response to new information technologies, providing new forms of both production and use, as well as piracy and imitation. In the definition of the right to technological protection of the rights holders proposed above, it is important to underline and emphasize the expression „to guarantee the implementation of permitted acts". The permitted acts fall within the scope of the exceptions and limitations, including those for which, according to the accepted interpretation of Art. 5, paragraph 2 of Directive 2001/29/EC, Member States have discretion. Despite their optional nature, contrary to the mandatory exceptions provided for in Article 5, paragraph 1, one cannot support the understanding that seems to derive indirectly from the opinion of some authors (see for example those mentioned in notes 15 and 16 of the Opinion of advocate general of 11 May 2010 in Case C-467/08, ECLI:EU:C:2010:264). Carried to the limit and related to the subjective right of technological protection under consideration here, it could allow freedom for Member States to ignore the requirement that TMs be compatible with permitted acts. Such an understanding would be against the EU acquis. For example, „the concept of ‚fair compensation' within the meaning of Article 5(2)(b) of Directive 2001/29/EC ... is „an autonomous concept of European Union law and interpreted uniformly throughout the European Union...", the Court concluded in its judgment in Case C-467/08, Padawan SL, ECLI:EU:C:2010:620, paragraph 33. The validity of the argument that „the approximation of laws means that an autonomous Community law concept should be created"... (Riesenhuber, 2006) cannot be denied. If it is the intention to approximate laws, the author argues that one standard has to be set. Such understanding is supported by many CJEU decisions in different factual and legal contexts. However, the conduct of rights holders obliges them to use TMs compatible with the exceptions and limitations to ensure their application, constantly and in new forms, opposes their actual use. This applies to all protected objects, including databases.

3. ON THE TRAJECTORY OF ONE CASE

In the context of the above, the lack of resonance within academic legal circles regarding significant cases of use of technological measures (TM) that are incompatible with exceptions and limitations and which reveal the endpoint of their not-so-obvious trajectory, is surprising. This observation is illustrated by the example discussed here, concerning the extensions for encrypted media (so-called EME „Encrypted Media Extensions“) and the EME specification in the HTML standard (IFLA, 2017). Somewhat justified by arguments pointing to the lack of complex – including highly specialized technological knowledge that could complement legal expertise – this missing resonance cannot fit into the academic interest in gaining essential information for research. In fact, similar arguments are not foreign to various interested parties, who qualify them as ‚misconceptions about „EME putting DRM in HTML.“‘ Before we delve into the essence of the debate, we will briefly defend the connection between databases as a protected object of intellectual property rights and HTML. Even though the general public might be tempted to appreciate a brief lecture on the importance of HTML, it is sufficient to say here that HTML is the alphabet and the multimedia language of the web. Web applications often extract data from databases, process it, and display it using HTML. However, its significance extends far beyond databases. This highlights the importance of this case, including from a research perspective. In short, the promoted goal of the EME specification in HTML is to facilitate the viewing of video content online, which would otherwise only be possible by installing separate plugins for different content. The fire of the debate about the Encrypted Media Extensions specification in the HTML standard started when the idea was first announced and continued burning until the draft of the working group of The World Wide Web Consortium (W3C) was finalized in 2017. Unfortunately or not, the draft was not scrapped, which would have ended the process before the smoke reached UNESCO. Behind the polite tone of UNESCO‘s letter to W3C dated March 31, 2017, lies a concern about introducing standardized EME embedded in the browser, where the level of control will cascade down to the user interface (UNESCO, 2017). In short, it states that this has the potential to hinder the use of circumvention tools to access content that is not legitimately restricted; to reduce opportunities for security researchers to identify and publish vulnerabilities in the combination of EME and DRM mechanisms; to limit user choice with standardized EME when accessing DRM content through their browser; to allow browsers to prevent users from exercising their lawful right to fair use of copyrighted video, including further adapting content for people with disabilities; to compromise the right to a secure internet; to affect the right to education, accessibility, and openness by restricting open educational resources caught in the EME-DRM networks; to damage interoperability and even network neutrality, thus impacting openness and accessibility. Even when the implementation of standardized EME in a browser would be subject to local and international laws, while previously the law could be applied at other levels of content production, distribution, and use, the new EME would add a technical layer for controlling expression and fair use – topics likely best addressed as areas of ethical choice in a technically neutral environment, rather than being inherently restricted by a technical standard.“The current balance of rights would be tilted towards an in-built technical bias towards intellectual property and away from other competing rights” (La Rue, 2016). This letter brings UNESCO closer to the position of prominent lawyers, writers, and activists who are raising the alarm about the worrying trend toward the over-protection of intellectual property. Not only UNESCO but also many stakeholders are getting involved, including those, authorized by governments to protect the public interest. For example, the International Federation of Library Associations and Institutions (IFLA), an authoritative international organization, summarizes its arguments in a document, based on the principles of

free access to information, ideas, and works of imagination, as well as freedom of expression, embodied in Article 19 of the Universal Declaration of Human Rights. IFLA observes that it "also understands the logic behind the integration of EME into the HTML Standard, in that this would bring a measure of simplification and unification of tools used". By asserting that EME allows TPM to have a place within the very HTML protocol that underpins the functioning of the Internet, IFLA shares concerns that this disrupts the balance of rights between rights holders and users, to the detriment of the latter, and even calls into question the very definition of ownership. They note that DRM can be used to block permitted actions, which contradicts the public mission of libraries to preserve, reproduce, and/or lend books and other materials; that this would hinder libraries' ability to archive and preserve audiovisual materials; that not all national legislations explicitly allow the removal or circumvention of DRM that is inconsistent with exceptions, and in some jurisdictions, this may even be a criminal or civil offense (many jurisdictions also foresee administrative penalties such as fines or property sanctions); that even where circumvention or removal is legally possible, the procedure is slow, inefficient, and beyond the capacity of many organizations; that the introduction of EME, along with the lack of effective mechanisms to disable DRM, would, in many jurisdictions, lead to additional barriers to the lawful use of works. It is noted that DRM does not cease ipso facto – with the expiration of a certain term, as is the case with copyright itself; it does not necessarily differentiate between users with lawful access. There is a risk that libraries will end up with materials that are no longer subject to copyright but still have DRM. EME, together with DRM, may render the transfer of ownership meaningless; it may make it impossible to transfer works when an organization or business changes ownership, or when the owner dies. Their application may hinder users in the fair use of works for activities such as commentary or criticism, restricting their freedom of expression as provided by Article 9 of the Universal Declaration of Human Rights. The lack or imperfections in provisions for the circumvention of DRM constitute an absolute and unacceptable obstacle to the recognized right of users to repair, research, or test products they have purchased (which, incidentally, runs counter to government proclamations, such as the measures in the EU initiative known as A New Deal for Consumers). When DRM allows (the opposite is the exception) the collection and analysis of data, concerns arise about user privacy in particular, and human rights in general (IFLA, 2017).

The counterarguments are contained mainly (and not only) in a document called "Information about W3C and Encrypted Media Extensions (EME, 2016)" published on March 16, 2016. They boil down to denying any connection between DRM and the Encrypted Media Extensions (EME) specification, the existence of which is in turn the main argument of the opposition to the introduction of the specification. This specification -claim they- does not create nor impose a content protection or Digital Rights Management system. Rather, it defines a common API that may be used to discover, select and interact with such systems as well as with simpler content encryption systems. Their thesis is formulated decisively already at the beginning of the document: „EME putting DRM in HTML" is simply nothing more than a misconception that needs correction.

What are the facts, without getting bogged down in technological jargon? EME is embedded in HTML, for example, through <video> or <audio> tags in combination with JavaScript to interact with the EME API. Indeed, EME provides an API that allows web browsers to access content protection systems known as Content Decryption Modules (CDM) for the purpose of playing protected media. Although the functionalities of CDM are not precisely defined, even in the EME specification, they include decryption, unscrambling, and decoding in order to present the protected content according to the restrictions set by the content provider (e.g., no copying or recording,

blurring, restricted viewing and reading, geolocation, prohibition of framing, etc.). Simply put, the EME API and CDM collaborate to achieve this result, with the EME specification providing a framework for the browser to communicate with CDM. It defines how the browser should request a license (decryption key) from a license server and how to handle encrypted media streams. And yes, indeed, EME specification is open for implementation by anyone. However, three years after the adoption of the specification, the facts are that CDMs, with which EME interacts, are typically private and patented. CDMs have been implemented in all browsers, including, of course, those with the largest market share. The negative result in the trajectory of this story serves as a reminder of why the process was non-consensual and controversial. It turns out that an important WWW standard, in order to be functional, requires a proprietary component, for which, a fee must be paid—if they even permit it at all (regardless of whether this is due to market monopolists or, even worse, if it is). The addition of DRM, including through legally protected TPM, directly leads to undesirable economic consequences such as anti-competition, market concentration, monopoly, and market control, as well as security risks—and justifies some of the warnings from opponents of this controversial solution. The consequences are of such a nature that they cannot be an acceptable cost under the current provisions for TPM protection.

4. BACK TO THE DATABASES

If we return to databases, the authentic European contribution here is that technological measures benefit not only the holder of copyright over databases but also the holder of the sui generis right. In this sense, the title of the directive, which refers only to copyright and related rights, is narrower than its content. The databases themselves, as objects of intellectual property rights, have their own specificity, which is projected on their legal protection. In order to understand the concrete manifestation of the databases, it is necessary to first clarify the nature and content of the right to protection of TM in the context of intellectual property law. Which was already done above in the text. Although the specific nature and manifestations of TM law in relation to databases, due to the limited scope of this article, require a separate study, we will make some remarks. For this purpose, we will rely on the considerations and provisions in the two relevant directives and materials of preliminary rulings at the Court of Justice of the European Union (CJEU) in which the claimant presumed infringement of his sui generis right by circumventing the TMs that protect the databases. The relationship between these two rights in the field of databases raises many interesting legal questions that remain unanswered for now. The essence of the sui generis right of the creator of the database, according to Article 7 of Directive 96/9, is his right to prevent the extraction and/or re-use of all or a substantial part, assessed qualitatively and/or quantitatively, of the contents of this database data. This right is broader compared to the scope of protection for other objects, as acts of extraction and/or re-use are prohibited, regardless of whether the act is for commercial or non-commercial purposes (see Judgment in Case C-203/02, The British Horseracing Board and others, ECLI:EU:C:2004:695, para 48). Does this mean that the exceptions and limitations provided for in Directive 2001/29/EC, interpreted in the light of Article 9(a) of Directive 96/9, such as those for personal use, cannot be used against a TM-protected electronic database? Actions of extraction and/or reuse, as defined, must affect all or a substantial part of the database, which constitutes a specific limitation under the sui generis right of the database creator‘s power to prohibit them. Thus, what are the rights of the affected parties in the case of extraction and/or re-utilization of non-substantial parts of a TM-protected database through circumvention? The term ‚extraction,‘ defined as , the permanent or temporary transfer of all or a substantial part of the contents of a database to another medium‘ within the meaning of Directive 96/9 (Article 7(2)(a) and Recital 44 of the Database Directive, is also a source of internal tension. This tension

arises from the conflict between the technological and the legal. This is because even the broad interpretation of the concept of ‚extraction,' included in several judgments of the CJEU, cannot encompass all possible cases. Consequently, the essence of the concept has diverged from its legal definition, which is precisely what a diligent legislator should address. The ‚broad' interpretation of the concept of ‚extraction' reaches the horizon of postulating that the decisive criterion is the presence of an act of ‚transfer,' regardless of the nature and form of the operational method used (Case C-304/07, Directmedia Publishing GmbH, ECLI:EU:C:2008:552, paragraphs 35 and 36). Ergo, a ‚transfer' must still occur, albeit irrespective of the method or form. However, as the the Romans have said: ‚Non multa, sed multum'; the details matter, as does their quality. It should be noted that the acts of extraction in databases are typically carried out using various specific, lawful, and ethical technological means, such as Web Scraping, Data Mining Tools, and Data Extraction Tools. More importantly, however, there are techniques for extracting data from databases that do not transfer the contents of the database to another medium. Examples include: In-Database Analytics, Data Virtualization, Federated Queries, On-the-Fly Query Processing, Data Access Control and Views. The existence of technological measures which prevent such extraction without transfer can also reasonably be assumed, but which can also be circumvented. In such a hypothesis, would it be legal to protect TM against such "extraction", which even according to the broadest definition of the term was carried out without transferring the contents of the database to another medium? Or, to put it another way, does the prohibition of TM circumvention, provided for in Directive 2001/29 and not only there, apply in this case? It is a separate question whether in such cases of use without "transfer" the protection of the database manufacturer is adequate, if any.

5. CONCLUSION

The axiom states: any technological measure can be "broken", if we allow ourselves a characteristic borrowing from the specific jargon. That is, any defense can be circumvented and broken. This option encourages technical and economic progress. It is imperative, however, to return to the field of law, where the matter must be resolved. That is where the right question should be asked. And it is, if paraphrase Cory Doctorow, how are TMs technologically useful for stopping lawbreakers if the only thing stopping those lawbreakers from breaking it was the law - not the technological efficacy of DRM itself (Doctorow, 2017)? In order to be useful both to rights holders and to society as a whole, TMs must be „effective". In the context of the EU, should we rejoice or mourn that the directive advocates „effective" measures? What exactly did the legislator put in this adjective and are there effective technological measures, since there is always the objective possibility of being „broken"? A wise approach would consider that, like everything, this too is relative and a function of time. The axiom would lead some to jump to the conclusion that TMs are useless for their intended legal purpose. However, a wiser and more objective approach suggests another alternative to such a conclusion. A wise approach should take into account that TMs have deviated from their initial idea, making them infinitely useful for other purposes at the expense of the main one for which they were legalized, but where they have become less useful and in some cases harmful. Therefore, things must return to their proper place, in the field of law. Where there are no „good" and „bad" technological measures. But there are laws that reinforce the feeling of that contradictory union which gave birth to the expression „L'union de l'aveugle et le paralytique." But there should not be.

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