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COPYRIGHT PROTECTION IN THE INTERNET AGE: WHETHER COPYRIGHT CAN COMBAT PEER-TO-PEER TECHNOLOGY



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The advancement of technology has resulted in the change of traditional ideas and the concept of copyright protection. Some may assume that digital technologies, peer-to-peer (P2P) systems in particular, have put copyright protection at risk, for today anyone is capable of copying or disseminating a great number of copyrighted materials such as music, videos or books easily via the Internet. The *relevance* of the topic is determined by P2P technology being considered the most prevalent technology which has contributed to the spread of illegal file-sharing in the Internet age. This article is aimed to analyze the impact of P2P technology on copyright protection. The *novelty* of this paper consists in the development of specific proposals on the improvement of copyright protection in the Internet age through the comparative analysis of foreign legal acts. Given the present circumstances, the paper raises some legal questions whether there are appropriate legal acts to resolve the problems of illegal file-sharing and if so, whether they need to be further updated. To answer these questions, the author applies some legal research methods such as comparative-legal, historical, formal legal and

formal logic ones. The author concludes that regarding Digital Economy Act and Hadopi Law there is need to specify such a term as «subscriber». As the evidence shows, it might be a broad term, either a person at home or business like a café or a hotel, which enables another individual to connect to the Internet and therefore it would be a problem to find a true infringer. Moreover, it is essential to re-examine the IP addresses in tracking infringers, because in most cases it does not provide the irrefutable proof that a person has committed online infringement.

Key words: copyright, copyright infringement, peer-to-peer technology, illegal file sharing, internet service provider, user, server, downloading, BitTorrent, internet protocol address.

Introduction

The questions of copyright protection have been raised in the XVI and XVII centuries when the emergence of the movable printing press allowed a printed text to be widely produced and distributed. It could be believed that copyright was one of the first legal reaction to a technological challenge and the development of copyright might be considered as similar as the development of legal norms for the information-based society.¹

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¹Murray A. Information technology law: the law and society. Oxford University Press, 2016. P. 223.

Copyright is a type of intellectual property (IP) that regulates some creative works expressed in a tangible form. As copyright is not a material thing it is believed that it is hard to define ownership or to identify the stealing of creative works, therefore it might difficult to protect copyright. Generally, the relationship between right holders and users of copyright is covered by the law and recorded in agreements and might be varied due to geography, commerce, and other essential circumstances.² Copyright original works are listed not only in domestic law but also in some international conventions and treaties. For example, according to the articles of both the Berne Convention³ and Universal Copyright Convention(UCC),⁴ creative works are applied by copyright.

Yet, the rise of the web and technology has brought significant challenges for copyright protection. It is appeared to say that digital technologies make people or users copy, distribute and disseminate a great number of creative works such as music, movies, and books at lightning speed. As evidence shows that certain technologies like peer-to-peer (P2P) technology makes possible for consumers to share music without any payments and therefore destroying the values of copyright.⁵ According to Digital Music Report that 1 in 4 the net consumers in the world constantly have access to musical websites.⁶

The article will look at the existing legal issues of digital copyright. This article aims to examine how P2P technology considered as illegal file-sharing affects copyright protection in the digital era. We critically assess the development of P2P technology and some legal cases such as Napster and Grokster relating to online piracy. It could be argued that some copyright acts must be further improved or enhanced to tackle the issues of illegal file-sharing technologies. Although P2P technology has a cross-border effect, cross-border aspects of combating this type of infringement are not considered in the article. The article is structured as follows. We begin with the advent of P2P technology to explain how the technology itself works. Then we examine the development of file-sharing technology, in particular how it has disrupted right holders, government and service providers. This is followed by a discussion about appropriate legal acts from some jurisdictions which appear to combat copyright infringement. The methodology of this paper relies on some specific methods such as historical, comparative-legal, formal legal and formal logic. The paper has used some legal acts from the US, UK and France for primary sources.

²Klein B., Moss G., Edwards L. Understanding copyright: intellectual property in the digital age. SAGE, 2015. P. 2.

³Berne Convention for the Protection of Literary and Artistic Works // URL: https://www.wipo.int/edocs/lexdocs/treaties/en/berne/trt_berne_001en.pdf. (20.02.2020).

⁴Universal Copyright Convention (adopted 6 September 1952 entered into force 10 July 1974) // URL: http://www.tauvisual.com/copyrightlaws/convenzione_internazionale_copyright_ginevra1952.pdf. (22.02.2020).

⁵Ku R. S. R., The creative destruction of copyright: Napster and the new economics of digital technology. The University of Chicago Law Review. 2002. P. 263, 264.

⁶Guo Y., Hu W. Digital music copyright protection dilemma: a discussion on draft amendments of china's copyright law // Research on Selected China's Legal Issues of E-Business. Springer, Berlin, Heidelberg, 2015. P. 240.

1. The advent of Peer-to-peer technology

The term “Peer-to-peer” or P2P has been appeared at the end of the last century and has now become one of the popular technology around the world.⁷ P2P system is a technology that allows connecting some computers to share or search for some digital files.⁸ According to Vincents, P2P is the swapping of files between peer nodes across the network. A node here might be any devices such as a personal computer, mobile phone, iPad or any digital gadgets which appear to be as a part of a network. It could be argued that the true P2P network does not have any concepts like clients or services but it has the same nodes which at the same to function both of “servers” and “clients” to the other nodes of the network.⁹

Similar to that above, P2P can be described that it helps to transfer or share some digital files from one computer to another. In another words, it means that users can share some digital content with each other on the Internet.¹⁰ An interesting point has been given by Putter who claims that there is no need to use a centralized computer system when users share information with each other. So P2P helps users to share files directly and the shared files stored on the computers of clients and servers.¹¹ Moreover, Alexander Peukert explains well about the scope of P2P technology in his article “A Bipolar Copyright System for the Digital Network Environment”:

*«Peer-to-peer networks provide an architecture for stable, cheap and global sharing of any digitized information, be it music, movies, software, writings and other data. The peer-to-peer architecture makes it possible for thousands of terabytes to rush through P2P networks every month without anybody having to invest in and provide for a centralized server».*¹²

That is why P2P technology has become popular among users and grown incredibly.¹³ Therefore, it is believed that people can swap various files such as movies, music, computer programs, and video games and almost any sort of digital works through P2P technology. In reality it is estimated millions of peoples have engaged in this network.¹⁴

It is noteworthy to say that the P2P file-sharing system might be divided into three types such as centralized, decentralized and hybrid file-sharing networks. This division mostly

⁷Oram A. Peer-to-Peer: harnessing the benefits of a disruptive technologies. “O’Reilly Media, Inc”, 2001. P. 3.

⁸Mooney P., Samanta S., Zadeh A.H.M. Napster and its effect on music industry: an empirical analysis // Journal of Social Sciences. 2010. № 6 (3). P. 303.

⁹Vincents O.B. When rights clash online: the tracking of P2P copyright infringements vs. the EC personal data directive // International Journal of Law and Information Technology. 2008. T. 16. № 3. P. 272.

¹⁰Rowland D., Macdonald E. Information technology law. Cavendish Publishing Ltd, 2015. P. 504.

¹¹Putter J. Copyright infringement v. academic freedom on the internet: dealing with infringing use of peer-to-peer technology on campus networks // Journal of Law and Policy. 2006. T. 14. P. 4.

¹²Strowel A. (ed.). Peer-to-peer file sharing and secondary liability in copyright law. Edward Elgar Publishing, 2009. P. 2.

¹³Putter J. Op. cit. P. 4.

¹⁴Vincents O. Op. cit. P. 272.

depends on how information or files are stored in computers. Centralized P2P technology usually relies on the connection between client and server. The centralized server appears to be essential because it needs to manage the data and files of peers or users. Then, the client should connect with the server to report its web address and the names of all data that it is eager to share. After collecting all data from the clients, the server can make a centralized database.

By contrast, the decentralized P2P technology is considered to be a pure P2P architecture because there is no central server.¹⁵ The main thing of this architecture is that each client appears to be equal since a special peer who has control roles does not exist. As a rule, the information in such a system is shared or transferred by numerous peers. And it is widely accepted that today this model of P2P system does remain in most file-sharing systems.¹⁶

The third model of P2P technology is normally named as the hybrid P2P system. It should be mentioned that the hybrid P2P system includes the elements of the abovementioned P2P models.¹⁷ The most prominent feature of this system is that a central server acts as an intermediary. Furthermore, these central servers have to complete two main tasks. First, acting as directories they help users to be connected with the current IP addresses. Second, they tend to direct traffic to clients.¹⁸

Briefly, it can be seen that P2P systems have been constantly upgraded because of the quick development of digital technologies. As some tough issues such as online copyright infringement may appear because of that, P2P networks should be examined from the beginning. Thus, to understand P2P networks and the numerous legal problems about their process, the development of file-sharing technology ought to be carefully analyzed. The following sections will highlight these issues.

2. The digital disruption: the development of P2P technology

By the end of the 20th century, the emergence of the Internet brought about the progress of the P2P networks. The network lets users connect rapidly with each other and disseminate information as easily as pushing a button.¹⁹ For example, free Homepage P2P technology became a popular tool in which users could upload the digital files to allow other people to get a specific file. Also, it is noteworthy to mention that Hotline or Messenger was another technology to distribute some digital files. The vital part of these networks was that people could communicate online and make an electronic bulletin board.²⁰

¹⁵Ding C.H., Nutanong S., Buyya R. Peer-to-peer networks for content sharing in Subramanian R., Goodman B.D. (ed.). Peer-to-peer computing: the evolution of a disruptive technology. Igi Global, 2005. P. 29.

¹⁶Maly R.J. et. al. Comparison of centralized (client-server) and decentralized (peer-to-peer) networking // Semester thesis, ETH Zurich, Zurich, Switzerland. 2003. P. 4.

¹⁷Yang B., Garcia-Molina H. Comparing hybrid peer-to-peer systems // Proceedings of the 27th Intl. Conference on Very Large Data Bases. 2001. P. 561.

¹⁸Maly R. Op. cit. P. 4, 5.

¹⁹Mooney P. Op. cit. P. 303.

²⁰Ibid. P. 303.

The advent in 1999 of the Napster service opened the new era of P2P technology by bringing the file-sharing system to another level.²¹ The Napster was created by a young computer science student, Shawn Fanning at Northeastern University in Boston who launched for the first time in June 1999.²² The most interesting of this file-sharing network was that users utilized the Napster's centralized server to detect the copies of recorded music accessible in MP3 format for downloading from another user's computers. The broadcast of MP3 files is facilitated among users by Napster. In detail, some actions could be achieved by users via Napster: First, it makes possible to store music files on computer hard drives to copy from other user's computer; It looks for audio files stored on other person's devices; Third, it transmits the exact copy of audio formats from one device to another through the net.²³

However, it was stated that copyright protection became a huge problem because of the extensive primary infringement violated by the clients of Napster. Thus, it brought a case named as *A&M Records v. Napster Inc.* for illegal file sharing.²⁴ According to the court's decision, it was held that the exclusive rights of plaintiffs were infringed due to an issue that the Napster's clients uploaded and downloaded illegally some recorded music. Napster used a centralized server which helped clients to infringe copyrighted works.²⁴ The courts claimed that Napster knew what users were doing and avoided policing infringement to get as many as users in its service.²⁶

At the end of a long lawsuit, Napster was crashed in 2001, since the courts made a statement that the owners must ban the copyright infringement. But some investors did not want to leave Napster heritage because around 80 million already used Napster service. Later, in 2003 Napster 2.0 had been reincarnated again but this time as a charged P2P system. It could be believed that today it is associated with some companies such as Microsoft, Yahoo, Gateway, Imitation and so on.²⁷

The next stage of the file-sharing system relied on some providers who attempted to use a more complicated decentralized method to distribute copyrighted works and permitted sharing video and music files. In contrast to Napster, these providers allowed clients to download copyrighted works directly from another computer without a centralized server. They appeared to take income by inviting some advertisers who got their messages in inserting spyware.²⁸

After Napster's failure, new file-sharing providers, for example, OpenNap appeared which relied on a less centralized server. The system aimed to be strong before copyright

²¹ Atkinson B., Fitzgerald B. *Short History of Copyright*. Springer International Pu, 2016. P. 112.

²² DeVoss D. N., Porter J. E. *Why Napster matters to writing: Filesharing as a new ethnic of digital delivery* // *Computers and Composition*. 2006. T. 23. № 2. P. 180.

²³ *A&M Records, Inc. v. Napster*, 239 F.3d 1004 (9th Cir. 2001) // URL: <https://copyrightalliance.org/wp-content/uploads/2016/09/AM-Records-v.-Napster.pdf>. (26.02.2020).

²⁴ *Ibid.*

²⁵ *Ibid.*

²⁶ Atkinson B. *Op. cit.* P. 112.

²⁷ DeVoss D. *Op. cit.* P. 182.

²⁸ Atkinson B. *Op. cit.* P. 115.

litigation by utilizing a sophisticated decentralized method. Yet, OpenNap failed because of the aggressive campaign of copyright industries which threatened to take down completely. In 2000, a new type of network, eDonkey emerged and similar to OpenNap, autonomous servers were vital to look for digital files in this network. This network was arguably the first system which enabled digital files to be downloaded in a piece from different sources which later used by most providers. Despite some lawsuit issues, eDonkey remained a prevailing network till the late 2000s when its popularity seems to be dropped.

Furthermore, some robust and complex networks, in particular, the Gnutella and Fast Track protocols raised which appear to be apprehensive decentralized. It should be mentioned that both technologies were neither organization nor services. They were mere languages by which computers could contact each other. In fact, the decentralized index search of both technologies helped to copy the functional capability of Napster and authorized to share illegal files.²⁹

According to Gnutella, to look for a file, the user may able to send a message or “node” to its neighbors, who on their part, send it on their neighbors and it may happen until a resource is found. It is important to note that since messages are transmitted among peers or users, it is believed that the network makes hard to follow what users are doing. Furthermore, as the process is going on and their access is monitored by users it is believed that there is a great reduction of liability of network developers in copyright infringement.³⁰ While FastTrack protocol appears to be slightly different from Gnutella. The essential feature of FastTrack software which distinguishes from other P2P networks was the use of “supernodes”. To be clear, a “node” means an end-point or a user's personal computer. So the “supernode” is a node that has a complicated operation to collect information from other computers.³¹

However, the abovementioned networks lost their popularity because of the number of lawsuits concerning copyright infringements. Like previous cases, the legal dispute appeared due to illegal file-sharing through the internet. For example, in *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster*, the defendants, Grokster and Streamcast were software distributors who allowed users to exchange digital files through the Internet in particular, P2P technology. It is noteworthy that both defendants used FastTrack technology which relied on P2P architecture and system.³² Thus, the defendant was sued for indirect infringement because of the illegal copying of copyrighted works by network users. Yet, at the beginning of the lawsuit, the district court held a decision in favor of Grokster, because the court considered that the defendant used a decentralized server. Also, in the appellate litigation, the court upheld the district court's decision by claiming that the absence of

²⁹Klumpp T. File sharing, network architecture, and copyright enforcement: An overview // *Managerial and Decision Economics*. T. 35. № 7. P. 447.

³⁰Goel S., Miesing P., Chandra U. The impact of illegal file peer-to-peer file sharing on the media industry // *California Management Review*. 2010. T. 52. № 3. P. 12.

³¹*Metro-Goldwyn-Mayer Studios, Inc. v. Grokster*, 259 F. Supp. 2d 1029 // URL: <https://casetext.com/case/metro-goldwyn-mayer-studios>. (28.02.2020).

³²Ibid.

control over the illegal sharing of the users was actually enough to defend Grokster from copyright violation. Despite everything, the Supreme court took a different approach named “inducement infringement” explaining that intention to induce infringement was the same as copyright infringement because Grokster intended to offer a network that replaced Napster and did want to filter or block illegal copying.³³

Nowadays, BitTorrent technology is quite popular among users to share copyrighted materials.³⁴ BitTorrent is a P2P protocol in which peers connect each other to distribute digital files over the Internet.³⁵ The protocol was invented by Bram Cohen who set up a software firm called BitTorrent Inc that makes original software. It is noteworthy that a peer is a program inserting in a computer that helps to share content. The content is divided into pieces or chunks which are swapped among peers to generate the full content.³⁶ Peers who have whole torrent files are named seeders, whereas peers with no full torrent are leecher.³⁷ Next, a swarm is defined to be a set of peers downloading or uploading a torrent file. And the torrent files normally store information about large digital content, especially, the tracker files. The tracker files help to identify some active users who are sharing the content. Thus, a new user can join one or more of these active users and share the content.³⁸

It should be mentioned that torrent operation itself is not copyright infringement; lots of services may use it. But, what The Pirate Bay has done is considered to be an illegal act, because it enabled to share some unlicensed files.³⁹ Unlike Napster, it does not have infringed copyrighted materials and no connection to them. Rather it has “trackers” files that appear to help the consumers of file-sharing network to find each other to download unlicensed materials. Therefore, the UK High Court held a decision by claiming that the Pirate Bay allowed its users to infringe copyrighted works.⁴⁰

In short, this section has reviewed the periods of the P2P system, especially some legal issues of copyright protection which arose because of these technologies. It could be suggested that even some legal problems of copyright violation were tackled in one period, every time P2P technology could find some loopholes in copyright protection. Therefore, there is an argument that says that strong copyright laws always be enhanced to efficiently protect copyright.

³³Hua J.J. Toward a more balanced approach: rethinking and readjusting copyright systems in the digital network era. Springer, 2015. P. 110.

³⁴Kulkarni S. The bittorrent lawsuit: why sly stallone is out to get you. The Conversation, 2011 // URL: <https://theconversation.com/the-bittorrent-lawsuit-why-sly-stallone-is-out-to-get-you-1231>. (02.03.2020).

³⁵Poort J. et al. Baywatch: Two approaches to measure the effects of blocking access to the pirate bay // Telecommunications Policy. 2014. T. 38. № 4. P. 384.

³⁶Mastorakis S. et al. nTorrent: Peer-to-peer file sharing in named data networking // 2017 26th International Conference on Computer Communication and Networks (ICCCN). IEEE, 2017. P. 1.

³⁷Merkel R. BitTorrent and the digital fingerprints we leave behind. The Conversation, 2015 // URL: <https://theconversation.com/bittorrent-and-the-digital-fingerprints-we-leave-behind-39854>. (02.03.2020).

³⁸Kulkarni S. Op. cit.

³⁹Groom J. The Pirate Bay: CJEU rules that operating a torrent file indexing site is a communication to the public // Journal of Intellectual Property Law & Practice. 2017. P. 966.

⁴⁰Hern A. European Court of Justice Rules Pirate Bay is Infringing Copyright. The Guardian, 2017 // URL: <https://www.theguardian.com/technology/2017/jun/15/pirate-bay-european-court-of-justice-rules-infringing-copyright-torrent-sites#maincontent>. (02.03.2020).

3. Appropriate laws on Peer-to-peer networks in some states

It could be argued that legal acts relating to copyright originate or develop as long as technology advances. New technologies have disrupted the methods of access and dissemination of creative works. Therefore, the copyright system is constantly attempting to respond to the new approaches of copy and distribution of works caused by innovations.⁴¹

Some developed states and regions such as the US and the EU are constantly updating and reforming their copyright system because of the quick development of new technologies. As the net virtually breaks the national borders, it seems that national legal acts look inefficient to tackle the issue caused by the new technologies. A robust national law may look useless or unproductive before copyright infringement brought about by other countries. Consequently, some jurisdictions asked for incorporating some provisions in international conventions to deal with new challenges. Then, the outcomes of changes were returned to these jurisdictions as a mandatory requirement. These reforms resulted in the formation of some serious and robust domestic digital copyright laws such as the Digital Millennium Copyright Act (DMCA) in the US and others.⁴²

3.1 United States

It could be argued that some treaties namely the World Intellectual Property Organization (WIPO) Copyright Treaty and WIPO Performances and Phonograms Treaty have affected the US to adopt the DMCA which signed by President B. Clinton in 1998. One of the primary aims of that law was to regulate digital copyright.⁴³ Notably, the act forbids the circumvention of technological protection measures (TRMs) to avoid the unlicensed use of copyrighted works; it also prohibits to remove or change digital rights management information applied to find out copyright works. However, the law also makes some exceptions: first, anti-circumvention rules may except law enforcement, intelligence services or government actions; second, the exceptions might be for non-commercial libraries, education centers or personal privacy issues.

Another vital part of the DMCA was issues about the liability of internet service providers (ISPs). The act implemented the term “safe harbor” under which ISPs are free from copyright infringement. So, ISPs are protected by a safe harbor if they adequately respond to the following circumstances:

A) (i) Service providers do not know that copyrighted works on the web are violated; (ii) ISPs are unaware of apparent reasons of copyright violation; (iii) on getting such facts or knowledge, it rapidly deletes unauthorized materials; B) ISPs do not take commercial advantage of illegal activity; C) Once they are notified about copyright infringement, react quickly to eliminate infringing materials. It is believed that otherwise, ISPs will be responsible for online copyright infringement.⁴⁴

⁴¹Hua J. Op. cit. P. 1.

⁴²Ibid. P.1.

⁴³Digital Millennium Copyright Act 1998 // URL: <https://www.copyright.gov/legislation/dmca.pdf>. (03.03.2020).

⁴⁴Ibid s(202)(a).

For instance, there was a case *Viacom v. Youtube*⁴⁵ where a claimant, Viacom brought a lawsuit against a defendant, Youtube owned by Google alleging that the defendant infringed copyright materials by permitting users to share some clips which belonged to the claimant. According to the decision, Youtube was not able to control copyright violation and it did not deliver the clips at the time when it operated. The court was in favor of Youtube claiming that there was no proof that a video sharing service allowed its consumers to infringe and therefore the defendant was under the regulation of DMCA. It has been argued that the video-sharing service met the full conditions of safe harbor provisions, thus it was not responsible for online infringement.⁴⁶

In short, it is plausible to say that DMCA presents not only robust but also adequate protection against copyright infringement in the information age.

3.2 United Kingdom

Digital Economy Act (DEA) was adopted as new legislation on 08 April 2010. The act aimed to provide a better copyright protection system that would be able to combat online piracy.⁴⁷ Before DEA, a legal act such as the Copyright, Designs, and Patents Act 1988 was unable to completely defend copyright against online infringement where infringers are myriad. Also, it should be mentioned that before adopting the act the government wanted copyright holders and ISPs to be cooperated to reach a better solution and it led to the memorandum of understanding signed between ISPs, the government and other members of creative industries.⁴⁸

It could be argued that the act provides three main mechanisms for minimizing internet piracy. First, according to the “Notifications System” of the act, ISPs have to warn their users in the event that the users' internet protocol (IP) addresses have been detected by right holders are used to violate copyrighted materials. Also, ISPs are asked for making lists of copyright violation and warn the users who have exceeded a certain number of copyright violations and thus it makes much easier for right holders to sue users on the court. Second, ISPs have to take all reasonable steps to curb illegal file -sharing by suspending the access of the user to the Internet as well as limiting the speed.⁴⁹ According to the case, *Zadig Production v. Google Inc.* the court held a decision that as Google failed to provide technical measures to stop copyright violation, it was liable for infringing videos that disseminated across the Internet. And the judgment says that hosting providers have a duty to use technical measures to stop infringing contents. Finally, the act allows ISPs to block access to a certain online location where infringing contents are constantly found or identified.⁵⁰

⁴⁵*Viacom v. YouTube*, 718 F. Supp. 2d 514 // URL: https://www.law.berkeley.edu/files/Viacom_v_YouTube.pdf. (04.03.2020).

⁴⁶Hassanabadi A. *Viacom v. YouTube – All Eyes Blind: The Limits of the DMCA in a Web 2.0 World* // *Berkeley Technology Law Journal*. 2011. T. 26. № 1. P. 4.

⁴⁷Cusack N. *Is the Digital Economy Act 2010 the most effective and proportionate way to reduce online piracy?* // *European Intellectual Property Review*. 2011. T. 32. P. 559.

⁴⁸Karwowska A. *Copyright and the Digital Economy Act: A Comparative Perspective* // *European Journal of Comparative Law and Governance*. 2015. T. 2. № 1. P. 21.

⁴⁹*Ibid.* P. 21.

⁵⁰*Ibid.* P. 22.

However, there were some controversial points relating to the effectiveness of the DEA. Firstly, the existing act does not clearly define the meaning of a subscriber. Actually, subscribers might be people at home or a company which set up a business like a café or educational centers making another individual use the Internet. Secondly, relying on the IP addresses to find copyright infringers has raised a concern, for example, to monitor users may not provide enough pieces of evidence that users have infringed copyrighted works. This is because that IP addresses usually identify a router in a building which may connect a number of computers and thus some innocent users could suffer from the act. The same situation may happen at libraries or airports which offers free Wi-Fi and therefore it might be sometimes hard to find a person who is responsible for online piracy.⁵¹ Thirdly, Section 3(3) DEA claims that right holders have to report ISPs by proving that their works have been infringed and showing a certain IP address which used as a tool for infringement.⁵² However, it is plausible to say that this is an inadequate way to combat illegal file-sharing. This is because infringers normally do not have a personal account instead they tend to steal other individuals' accounts in IP address and use them for infringing copyrighted materials.⁵³

Addition to the above drawbacks, Karwowska concludes that the DEA could not demonstrate its effectiveness due to the following reasons: firstly, the technical measures and systems which the DEA introduced were too costly and expensive. For example, it asked ISPs to spend more money on tracking infringers and collecting their data; secondly, the above three mechanisms adopted by the act appeared to be not only possible to eliminate online infringement, but also put freedom of expression at risk; thirdly, the DEA was unable to maintain a fair balance between the copyright owners and the ISPs.⁵⁴

To sum up, initially the DEA was adopted to protect the rights of owners on their works they create before the quick development of technologies. In order to curb online copyright infringement some technical measures such as limiting access speed or blocking system have been provided under the act. However, it could be true that the above drawbacks make the act still receive some criticisms in terms of efficiency.

3.3 France

It has been argued that the adoption of Hadopi (High Authority for the Diffusion of Works and the Protection of Copyright on the Internet) law made France the first state that used a warning system to combat online copyright infringement.⁵⁵ The primary purpose of that act was to enhance the protection of creative industries on the web.⁵⁶ The act says that any

⁵¹Mendis D. Digital Economy Act 2010: fighting a losing battle? Why the 'three strikes' law is not the answer to copyright law's latest challenge // *International Review of Law, Computers & Technology*. 2013. T. 27. № 1-2. P. 63.

⁵²Digital Economy Act 2010 s 3(3) // URL: http://www.legislation.gov.uk/ukpga/2010/24/pdfs/ukpga_20100024_en.pdf. (05.03.2020).

⁵³Cusack N. Op. cit. P. 563.

⁵⁴Karwowska A. Op. cit. P. 34, 35.

⁵⁵Lucchi N. Regulation and control of communication: The French online copyright infringement law (HADOPI) // *Cardozo Journal of International and Comparative Law (JICL)*. 2011. T. 19. P. 5.

⁵⁶Karwowska A. Op. cit. P. 29.

infringers were monitored by the ISPs. It is believed that one of the principal features of the act was the introduction of a special administrative body or Hadopi which intended to control illegal file-sharing through the web. It is noteworthy to mention that the act introduced three strikes approach or warning system which meant that an infringer was notified by ISPs. The first warning may come in the following messages “Warning, your net connection is used to infringe copyrighted materials” and if the same illegal actions are repeated within six months then the second message could immediately come. Lastly, a judge may apply some sanctions against the alleged infringer if he or she ignores the previous two warnings. The imposed sanctions had various types from charging a fine to suspending the access to the web.⁵⁷ Moreover, the infringers had to pay subscriber fees, even their access to the net was ceased. Also, there were not allowed to change their ISPs during the suspension time.⁵⁸

It should be noted that since the adoption of Hadopi law there were several changes that resulted in accepting Hadopi-2 and later Hadopi-3 laws. The latest changes were under Hadopi-3 law in 2013 when the French government passed a decree announcing to abolish the suspension of the Internet access as a penalty and shift the function of Hadopi agency to a French regulation agency.⁵⁹

However, Hadopi law became the cause of unending hot debate from the beginning due to its tough sanctions against online infringers and Hadopi agency's policy to monitor copyright infringement on the web. Despite the announcement of the Hadopi agency that claimed the three strikes procedure had positive results, some do not seem to agree with this statement because the law was ineffective in solving online piracy as reported by a study. The study found out that the law could not stop infringers to violate copyright content and consequently it did not minimize the scale of online infringement. The study also mentioned about facts that Hadopi law may have impacted on users by altering their methods to infringe creative works.⁶⁰ According to Guadamuz, it was claimed that the French anti-piracy legal act has become a controversial issue among policymakers and lawyers. For example, first, there was the rejection of the act by Parliament and then it led to the adoption of the Hadopi law. And now it has been turned out to some extent unlawful due to human rights, particularly, it has been assumed that the act seems to restrict the access to the web.⁶¹

Additionally, the French Constitutional court found out that the power of the Hadopi agency was too general or wide, because instead of restricting a certain group of people it took under control the whole population. As a consequence of this, the agency may restrict the rights of expression and free access to the Internet.⁶² Moreover, it is important to note that the detection of online infringers through the IP address is a questionable problem too in Hadopi law. As it was mentioned that IP address contributes to detecting a computer or location but not a true infringer.⁶³

⁵⁷Lucchi N. Op. cit. P. 6.

⁵⁸Karwowska A. Op. cit. P. 30.

⁵⁹Ibid. P. 30.

⁶⁰Ibid. P. 31.

⁶¹Guadamuz A. French constitutional court strikes down three-strikes. TechnoLlama, 2009 // URL: <https://www.technollama.co.uk/french-constitutional-court-strikes-down-three-strikes>. (10.03.2020).

⁶²Lucchi N. Op. cit. P. 15.

⁶³Ibid. P. 16.

The above analysis makes clear that the French anti-piracy law introduced three strikes system that intended to disconnect a user from the net or charge a fine to the online infringer. However, as is evident, the Hadopi law tends to be dubious to some extent among copyright holders, user and internet providers.

Conclusion

In conclusion, it could be said that the rise of P2P file-sharing networks has altered the common notions of copyright protection by making copyrighted works easier and more accessible. This paper has analyzed the concept of P2P technology, in particular the development of file sharing from Napster to current BitTorrent cases with respect to copyright infringement. Despite the collapse of Napster, Grokster and other types of file-sharing networks, it is fair to say that every time new, more complicated technologies seem to have appeared to challenge copyright protection.

While the DMCA has presented itself as a relevant law to promote creative works, the DEA and Hadopi law to some extent have similar issues and still remain a controversial and ineffective act in terms of tackling the problems of online infringement. In the above mentioned sections, evidence presents that both acts were unsuccessful because of the following reasons: firstly, the technical measures introduced by the acts were costly for ISPs; secondly, neither the DEA nor Hadopi law could reduce online infringement, instead the acts contributed to spread other types of illegal activity; thirdly, both acts were possible not only to reduce online infringement, but also limit human rights such as the freedom of expression. Therefore, given the abovementioned drawbacks of both acts, for successfully combating online infringement it is important to examine the broad context and consider the balance between the copyright holders, the users and the ISPs.

Thus, it is necessary to avoid misinterpretation, in particular clarify certain legal terms such as «subscriber» because it might be a person at home or business like a café or a hotel which allowed another individual to use the Internet and therefore it would a problem to find a true infringer. Last but not the least, it is essential to re-examine the IP addresses in tracking infringers, because it does not provide in most cases the irrefutable proof that a person has committed online infringement.

А.Қ. Аронов, халықаралық құқық магистрі, М.С. Нәрікбаев атындағы КАЗГЮУ Университетінің докторанты, ҚР Президентінің жанындағы мемлекеттік басқару академиясы Басқару институтының аға оқытушысы (Нұр-Сұлтан қ., Қазақстан): Интернет дәуірінде авторлық құқықты қорғау: авторлық құқық бір рангілі технологиямен күресе ала ма?

Технологиялардың дамуы авторлық құқықты қорғаудың дәстүрлі идеясы мен тұжырымдамасының өзгеруіне алып келді. Кейбіреулер цифрлық технологиялар, атап айтқанда бір рангілі жүйелер (P2P) авторлық құқықты қорғауға қауіп төндіреді деп болжамдауы мүмкін, өйткені бүгінде кез келген адам интернет арқылы музыка, бейнежазбалар немесе кітаптар сияқты авторлық құқықпен қорғалған материалдардың көп мөлшерін көшіре немесе тарата алады. Интернет дәуірінде P2P технологиясының файлдармен заңсыз алмасуға ықпал ететін ең кең таралған технология болып

саналуы тақырыптың өзектілігін құрайды. Бұл мақаланың *мақсаты* – P2P технологиясының авторлық құқықты қорғауға әсерін талдау. Мақаланың жаңашылдығы шетелдік құқықтық актілерді салыстырмалы талдау арқылы Интернет дәуірінде авторлық құқықты қорғауды жақсарту жөнінде нақты ұсыныстар әзірлеу болып табылады. Қазіргі жағдайды ескере отырып, мақалада файлдармен заңсыз алмасу мәселелерін шешу үшін тиісті құқықтық актілердің бар-жоқтығы туралы және егер бар болса, оларды одан әрі жетілдіру қажет пе деген кейбір құқықтық мәселелер көтеріледі. Осы сұрақтарға жауап беру үшін автор салыстырмалы-құқықтық, тарихи, формальды-құқықтық және формальды-логикалық әдістерді пайдаланады. Автор цифрлық экономика және Napster туралы заңдарға қатысты «тіркелуші» терминін нақтылау керектігін айтады. Деректер көрсетіп отырғандай, бұл үйдегі адамды немесе бизнесті, мысалы, басқа адамға Интернетке қосылуға мүмкіндік беретін кафе немесе қонақ үйді қамтитын кең термин болуы мүмкін, сондықтан шынайы бұзушыны табу қиынға соғады. Сонымен қатар, бұзушыларды бақылау кезінде интернет мекенжайларды қайта қарау маңызды, өйткені көптеген жағдайларда бұл адамның Интернетте бұзушылық жасағанының бұлтартпайтын дәлелдерімен қамтамасыз етпейді.

Тірек сөздер: авторлық құқық, авторлық құқықты бұзу, бір рәнгілі технология, файлдармен заңсыз алмасу, интернет-провайдер, тұтынушы, сервер, жүктеу, BitTorrent, интернет мекенжай.

А.К. Аронов, магистр международного права, докторант Университета КАЗГЮУ имени М.С. Нарикбаева, ст. преподаватель Института управления Академии государственного управления при Президенте РК (г. Нур-Султан, Казахстан): Защита авторского права в эпоху интернета: может ли авторское право бороться с одноранговой технологией?

Развитие технологий привело к изменению традиционной идеи и концепции защиты авторских прав. Некоторые могут предположить, что цифровые технологии, в частности одноранговые системы (P2P), ставят под угрозу защиту авторских прав из-за того, что сегодня любой человек может копировать или распространять большое количество защищенных авторским правом материалов, таких как музыка, видео или книги через интернет. *Актуальность* темы заключается в том, что P2P технология считается наиболее распространенной технологией, способствовавшей нелегальному обмену файлами в эпоху Интернета. *Целью* данной статьи является анализ влияния P2P технологии на защиту авторских прав. *Новизна* данной статьи заключается в разработке конкретных предложений по улучшению защиты авторских прав в эпоху Интернета посредством сравнительного анализа зарубежных правовых актов. Учитывая нынешние обстоятельства, в статье поднимаются некоторые правовые вопросы о том, существуют ли соответствующие правовые акты для решения проблем незаконного обмена файлами, и если да, то нуждаются ли они в дальнейшем совершенствовании. Для ответа на эти вопросы, автор использует такие методы исследования как сравнительно-правовой, исторический, формально-правовой и формально-логический. Автор приходит к выводу, что в отношении

законов о цифровой экономике и Надорі необходимо уточнить такой термин, как «подписчик». Как показывают данные, это может быть широкий термин, будь то человек дома или бизнес, например, кафе или отель, который позволяет другому человеку подключаться к Интернету, и поэтому будет трудно найти истинного нарушителя. Кроме того, важно пересмотреть интернет адреса при отслеживании нарушителей, поскольку в большинстве случаев это не дает неопровержимого доказательства того, что человек совершил нарушение в Интернете.

Ключевые слова: авторское право, нарушение авторского права, одноранговая технология, незаконный обмен файлами, интернет-провайдер, потребитель, сервер, скачивание, BitTorrent, интернет адрес.

References (transliterated):

1. A&M Records, Inc. v. Napster, 239 F.3d 1004 (9th Cir. 2001) // URL: <https://copyrightalliance.org/wp-content/uploads/2016/09/AM-Records-v.-Napster.pdf>. (26.02.2020).
2. Atkinson B., Fitzgerald B. Short History of Copyright. Springer International Pu, 2016.
3. Berne Convention for the Protection of Literary and Artistic Works // URL: https://www.wipo.int/edocs/lexdocs/treaties/en/berne/trt_berne_001en.pdf. (20.02.2020).
4. Cusack N. Is the Digital Economy Act 2010 the most effective and proportionate way to reduce online piracy? // European Intellectual Property Review. 2011. T. 32.
5. DeVoss D.N., Porter J.E. Why Napster matters to writing: Filesharing as a new ethnic of digital delivery // Computers and Composition. 2006. T. 23. № 2.
6. Digital Economy Act 2010 s 3(3) // URL: http://www.legislation.gov.uk/ukpga/2010/24/pdfs/ukpga_20100024_en.pdf. (05.03.2020).
7. Digital Millennium Copyright Act 1998 // URL: <https://www.copyright.gov/legislation/dmca.pdf>. (03.03.2020).
8. Ding C.H., Nutanong S., Buyya R. Peer-to-peer networks for content sharing in Subramanian R., Goodman B.D. (ed.). Peer-to-peer computing: the evolution of a disruptive technology. Igi Global, 2005.
9. Goel S., Miesing P., Chandra U. The impact of illegal file peer-to-peer file sharing on the media industry // California Management Review. 2010. T. 52. № 3.
10. Groom J. The Pirate Bay: CJEU rules that operating a torrent file indexing site is a communication to the public // Journal of Intellectual Property Law & Practice. 2017.
11. Guadamuz A. French constitutional court strikes down three-strikes. TechnoLlama, 2009 // URL: <https://www.technollama.co.uk/french-constitutional-court-strikes-down-three-strikes>. (10.03.2020).
12. Guo Y., Hu W. Digital music copyright protection dilemma: a discussion on draft amendments of china's copyright law // Research on Selected China's Legal Issues of E-Business. Springer, Berlin, Heidelberg, 2015.
13. Hassanabadi A. Viacom v. YouTube – All Eyes Blind: The Limits of the DMCA in a Web 2.0 World // Berkeley Technology Law Journal. 2011. T. 26. № 1.

14. Hern A. European Court of Justice Rules Pirate Bay is Infringing Copyright. The Guardian, 2017 // URL: <https://www.theguardian.com/technology/2017/jun/15/pirate-bay-european-court-of-justice-rules-infringing-copyright-torrent-sites#maincontent>. (02.03.2020).
15. Hua J.J. Toward a more balanced approach: rethinking and readjusting copyright systems in the digital network era. Springer, 2015.
16. Karwowska A. Copyright and the Digital Economy Act: A Comparative Perspective // European Journal of Comparative Law and Governance. 2015. T. 2. № 1.
17. Klein B., Moss G., Edwards L. Understanding copyright: intellectual property in the digital age. SAGE, 2015.
18. Klumpp T. File sharing, network architecture, and copyright enforcement: An overview // Managerial and Decision Economics. T. 35. № 7.
19. Ku R. S. R., The creative destruction of copyright: Napster and the new economics of digital technology // The University of Chicago Law Review. 2002.
20. Kulkarni S. The bittorrent lawsuit: why sly stallone is out to get you. The Conversation, 2011 // URL: <https://theconversation.com/the-bittorrent-lawsuit-why-sly-stallone-is-out-to-get-you-1231>. (02.03.2020).
21. Lucchi N. Regulation and control of communication: The French online copyright infringement law (HADOPI) // Cardozo Journal of International and Comparative Law (JICL). 2011. T. 19.
22. Maly R.J. et. al. Comparison of centralized (client-server) and decentralized (peer-to-peer) networking // Semester thesis, ETH Zurich, Zurich, Switzerland. 2003.
23. Mastorakis S. et al. nTorrent: Peer-to-peer file sharing in named data networking // 2017 26th International Conference on Computer Communication and Networks (ICCCN). IEEE, 2017.
24. Mendis D. Digital Economy Act 2010: fighting a losing battle? Why the 'three strikes' law is not the answer to copyright law's latest challenge // International Review of Law, Computers & Technology. 2013. T. 27. № 1-2.
25. Merkel R. BitTorrent and the digital fingerprints we leave behind. The Conversation, 2015 // URL: <https://theconversation.com/bittorrent-and-the-digital-fingerprints-we-leave-behind-39854>. (02.03.2020).
26. Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, 259 F. Supp. 2d 1029 // URL: <https://casetext.com/case/metro-goldwyn-mayer-studios>. (28.02.2020).
27. Mooney P., Samanta S., Zadeh A.H.M. Napster and its effect on music industry: an empirical analysis // Journal of Social Sciences. 2010. № 6 (3).
28. Murray A. Information technology law: the law and society. Oxford University Press, 2016.
29. Oram A. Peer-to-Peer: harnessing the benefits of a disruptive technologies. "O'Reilly Media, Inc", 2001.
30. Poort J. et al. Baywatch: Two approaches to measure the effects of blocking access to the pirate bay // Telecommunications Policy. 2014. T. 38. № 4.

31. Putter J. Copyright infringement v. academic freedom on the internet: dealing with infringing use of peer-to-peer technology on campus networks // Journal of Law and Policy. 2006. Т. 14.

32. Rowland D., Macdonald E. Information technology law. Cavendish Publishing Ltd, 2015.

33. Strowel A. (ed.). Peer-to-peer file sharing and secondary liability in copyright law. Edward Elgar Publishing, 2009.

34. Universal Copyright Convention (adopted 6 September 1952 entered into force 10 July 1974) // URL: http://www.tauvisual.com/copyrightlaws/convenzione_internazionale_copyright_ginevra1952.pdf. (22.02.2020).

35. Viacom v. YouTube, 718 F. Supp. 2d 514 // URL: https://www.law.berkeley.edu/files/Viacom_v_YouTube.pdf. (04.03.2020).

36. Vincents O.B. When rights clash online: the tracking of p2p copyright infringements vs. the EC personal data directive // International Journal of Law and Information Technology. 2008. Т. 16. № 3.

37. Yang B., Garcia-Molina H. Comparing hybrid peer-to-peer systems // Proceedings of the 27th Intl. Conference on Very Large Data Bases. 2001.

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НОВЫЕ КНИГИ

Культурная интеграция этносов в Казахстане: Коллективная монография / Кадыржанов Р.К. (отв. ред. и рук. науч. проекта). Алматы: Институт философии, политологии и религиоведения КН МОН РК, 2020. – 220 с.

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В книге исследуется актуальная и важная для Казахстана проблема культурной интеграции этносов. В национальном строительстве Казахстана культурная интеграция этносов на основе казахского языка и культуры играет решающую роль. В монографии изучаются основные формы и модели культурной интеграции этносов в Казахстане; анализируются этнические восприятия языковой ситуации и языковой политики

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