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Digital piracy in Russia

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ABSTRACT

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The Internet as a platform brought an opportunity for people to share and sell their content to millions of people worldwide. However, it also brought a problem of digital piracy that shortens income of people that own all rights for stolen digital property. To secure profits of right holders more countries should create and maintain laws that protect copyright and create an environment that stimulates people to support content creators.

The main goal of the thesis is to analyze and present the current state of digital piracy in Russian segment of the Internet. We chose Russian Federation as subject because Russia is one the biggest and notorious copyright infringers. In addition, since we are familiar with Russian language, it will be easier for us to find and analyze articles made in Russian language.

The content of the thesis will show the main channels of distribution of illegal digital content, the trends of digital piracy in Runet and amounts of money right holders lose as well as how much digital pirates earn by illegally sharing digital content.

However, a lot of attention is being paid to the digital market in Russia at the moment and we still consider Russia being a contributor to the fight against global piracy. Local copyright infringement situation is also getting slowly yet steadily better in the region.

For the sake of better readability, we converted all amounts of money to US dollars. The exchange rates dated 17.04.20 were used.

We would like to thank our supervisor teacher Illka Mikkonen for all the help and advices provided.

Keywords: digital piracy, copyright infringement, Russia

CONTENTS

TERMS AND ABBREVIATIONS

Double Marginalization	An effect caused by monopolies of retailing and manufacturing companies which decreases profits of all parties involved in the process
IPR	Intellectual Property Rights
ISP	Internet Service Provider
Memorandum	a short-written report prepared specially for a person or group of people that contains information about a particular matter
Perestroika	a period of significant changes in ideological, political and economic life of USSR during 1980-1990
Roskomnadzor	Federal Service for Supervision of Communications, Information Technology and Mass Media (in Russia)
Runet	Russian-language community on the Internet and websites
USTR	the Office of the United States Trade Representative
VK	the most popular website and online social network in Russia and CIS (post-Soviet) countries
VPN	virtual private network

1 INTRODUCTION

Throughout history people were willing to acquire the information of their choice, they would go to the library to read a book, music hall to listen to musical performance or movie theater to watch the latest movie. With the development of computer technologies and ways of sharing information online - people tend to read, watch and otherwise consume the content digitally. It has become familiar and comfortable for a huge amount of people all over the world, as in 2019 the total amount of Internet users surpassed 4.39 billion mark being more than 50 percent of the world population (Kemp 2019, cited 28.02.20).

Millions of units of content are being uploaded online every day, making it the biggest storage of information in history as well as creating an issue to the copyright holders. There is no need to produce pirated copies of DVDs with movies and games or print the books illegally as digital piracy replaced it all and today media content of all kinds can be obtained online without paying any funds even if the creators did not suppose to distribute it for free.

Companies that hold legal rights on their products suffer enormous losses due to the ease with which content can be acquired on the Internet. And with the rising usage of VPNs, finding those who do it becomes as difficult as protecting content in the first place.

Among countries with the highest piracy rates there are the United States of America, Russian Federation, India and Brazil (MUSO 2017, cited 28.02.19). We have decided it would be important to analyze one of these countries to understand and present why illegally obtained content is so freely distributed within their respective cyber space. The content of this thesis will present analysis of social media and websites that support or allow exchange of pirated content as well as methods, laws and organizations that fight hackers and software thieves.

The global piracy data will be compared to data in Russian cyberspace to analyze and determine vulnerabilities and methods which criminals utilize in order to distribute pirated content. Thus, the thesis shall give a person that is not familiar with Russian part of the Internet an understanding of the process of distributing content online illegally and methods that are used to fight it.

2   CURRENT STATE OF DIGITAL PIRACY

Digital piracy has become a widespread form of copyright infringement when Internet users got used to peer-to-peer (P2P) file sharing protocols such as BitTorrent. In 2013 BitTorrent had 15 to 27 million concurrent users and in February of the same year the protocol was responsible for 3.35% of all worldwide bandwidth (Wang 2013; Palo Alto Networks 2013).

According to Blackburn, Eisenach and Harrison Jr., it is estimated that 20% of digital film piracy and 5% of digital TV piracy was committed through BitTorrent in 2017. The total global amounts of piracy instances were approximately 46.9 billion and 183.4 billion for digital film and digital TV industry respectively. By the end of 2017, due to piracy the movie industry lost around $285.7 billion ($156.4 of which caused to movie producers directly). Financial loss for the TV industry amounted to $280.5 billion ($152.1 lost by TV producers). All of that data refers only to the movie and TV industry which digital piracy is not limited to. (2019, 7,11,13.)

Global rates of digital piracy will be divided into different industries in this chapter, furthermore, a process of website-blocking in the EU will be analyzed for later comparison of similar methods in Russia as an example of anti-piracy measure.

2.1   Global scale of digital piracy

Despite a common belief that the recent rise in popularity of on-demand streaming services - such as Netflix, Hulu and Spotify - has lowered the scale of digital piracy it is not the case and piracy is still on a rise. MUSO, a digital piracy authority, claims that 53% of all piracy cases happen on unlicensed streaming platforms, making it clear that online streaming is just the most popular way of consuming digital content nowadays and that the content is legal is not ensured. In the company's point of view, the content industries do not clearly understand the current digital piracy audience, the reasons they have to consume content illegally instead of buying or renting it. MUSO suggests that in case of right analysis of piracy data it should lead not only to the enhancement of content protection, but to better understanding of a pirated content consumer's profile, meaning the reduction of piracy scale as well as better success on a financial side for the industry on the whole. (MUSO 2017, cited 28.02.19.)

2.1.1 TV industry

In accordance with MUSO's 2017 annual report, the number of visits to piracy websites for television content were up 3.4% compared to the previous year. The vast majority of visits — 96.1% — were done through the illegal web-streaming websites, again demonstrating the aforementioned proliferation of Netflix-like services. More than half of the visits were made via mobile devices surpassing the usage of desktop devices for the first time. The torrent technology was responsible for five percent of all TV piracy. (MUSO 2017, cited 28.02.19.)

2.1.2 Film industry

On the contrary, visits to piracy websites to access film content decreased by 2.3% in 2017. Once again, most of the users relied on web-streaming websites forming 32.4 billion visits. Another 20.4 billion visits were done through torrent-based and web-download sites (10.3 and 10.1 billion respectively). The usage of mobile devices in order to access illegal film content was huge, overtaking desktop devices by the end of the year. However, the desktop was still a prevailing way to access films, being slightly more than a half. In the case of the film industry, torrent-based piracy held a strong portion of 20% percent of all piracy. (MUSO 2017, cited 28.02.19.)

2.1.3 Music industry

Music industry was always a huge part of digital piracy and 2017 was not an exception. The music piracy rose by 14.7% compared to previous year and the total amount of visits reached almost 74 billion. A popular way of obtaining music illegally — stream-ripper websites — which allow users to download music directly from sources such as YouTube, decreased greatly in the second half of the year. Nevertheless, stream-ripping was still the third most popular way of accessing music illegally, counting 15.7 billion visits. Web-streaming websites with 30.5 billion visits became the most popular way to access pirated content within the music industry as well, followed by web-download websites with 21.2 billion visits. In case of music piracy, mobile devices outweighed the desktop ones heavily, making 87.13% of all visits. (MUSO 2017, cited 28.02.19.)

2.1.4   Software industry

In a period between 2015 and 2017, the global illegal software rate declined by 2%, being still considerably high at the mark of 37% of all installed PC software worldwide, according to the BSA report. The majority of analyzed countries had the unlicensed software rate of 50% or higher, with Central & Eastern Europe, Asia-Pacific and Middle East & Africa regions with the highest rates (see Figure 1) (BSA 2018, 5, 7, 12—15.)
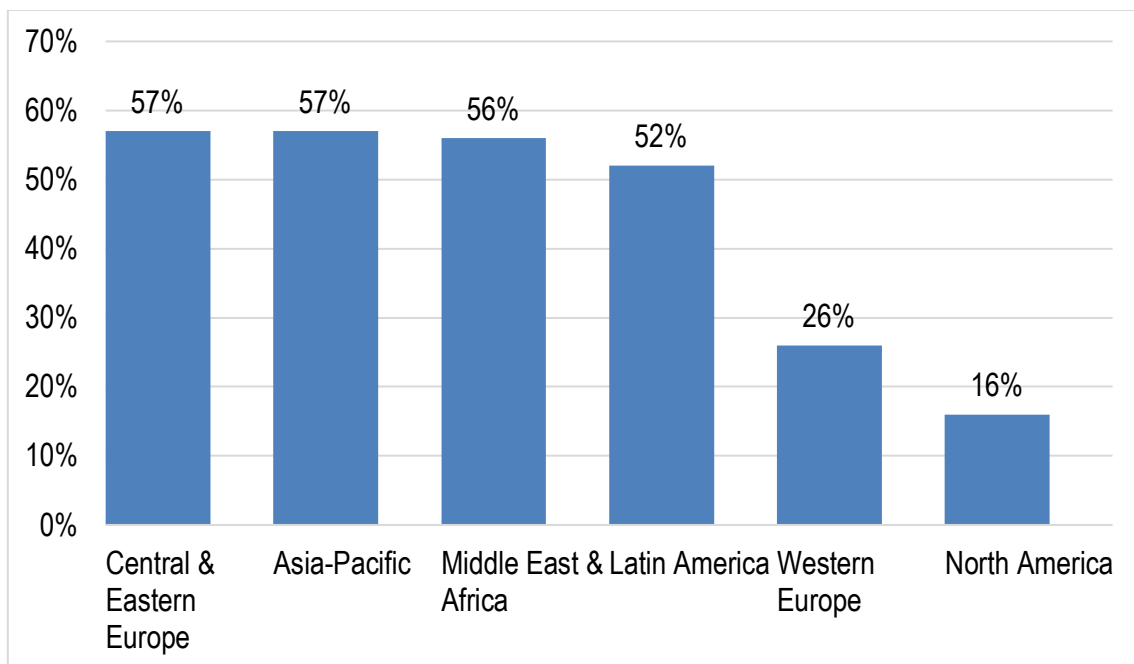
Figure 1.Rate of unlicensed software use (ibid.)

Countries with the highest software piracy rates in Western Europe were Greece (61%), Cyprus and Iceland (44%). While not having the highest rate in the region, compared to Armenia (85%) or Moldova (83%), Russia's 62% had the largest commercial value in Eastern Europe. Moreover, the decline of pirated software usage in Russia was one of the slowest and dropped by 1% only after 6 years. (ibid.)

Such high rates not only cause damage for software right holders and delay the economic wellbeing, they demonstrate the scope of risk companies and individual users are facing. It is reported that malware encounters are tightly linked with the usage of unlicensed software. In fact,

businesses have a one-in-three chance of getting the malware when illegal software is used. A single malware attack may cost a company approximately $2.4 million and up to $600 billion to the global economy every year. (ibid.)

2.2   Website blocking process in the European Union

Within the European Union, the acts of infringement of intellectual property are handled by IPR Enforcement Directive and E-Commerce Directive, that govern website blocking injunctions. According to EU regulations, in case of a blocked website, the blocking itself does not necessarily have to be impossible to circumvent if it strongly discourages users from accessing it. (Nurullaev 2017, 212—215.)

However, the users' right to lawfully access information online is important and the exact method of blocking should not unnecessarily limit the users, referring to Article 10 of the European Convention of Human Rights as it was stated by The European Court of the Human Rights. In some cases, courts have even refused to restrict the access to a website. As an example, in 2015, the District Court of Stockholm stated that the local Internet service provider may not be ordered to block the Pirate Bay, one of the biggest BitTorrent-based online indexes, as the activity of the Internet provider was not connected to the copyright infringements found on the website. (ibid.)

On the contrary, courts in the United Kingdom tend to hold a position oriented on the right holders more and since 2014, after the first website blocking decision granted by the UK High Court, such injunctions became quite common among English court cases in the copyright infringement field. (ibid.)

3 DIGITAL PIRACY IN RUSSIA

Being a huge state with a lot of its citizens using the Internet actively, Russia has its own unique practices, legal regulations as well as ways to distribute illegal content. Such features will be described and analyzed in this chapter.

3.1 "Anti-piracy" law

The current method of dealing with the infringement of intellectual rights on the Internet in Russia originated in July 2013 with the adoption of a so-called "anti-piracy" law. In the first place, the law introduced a procedure granting preliminary injunctions regarding website blocking; and secondly, a provision allowing Internet service providers removing the infringing information or blocking the access to it by the demand of the right holders. Since then, the law was a subject to changes twice, expanding its scope, adding extra obligations in order to restrict access to resources, and increasing the range of parties who can ask for removing or blocking the content. (Rassudov, Abashina & Darbinian 2018, 2—3.)

If a right holder is able to prove that the work that they have the exclusive rights to is available on a web resource illegally — an injunction may be granted by the Moscow City Court. Such injunctions are a common practice and used by foreign right holders as well, e.g. Warner Bros. Entertainment and Sony Music Entertainment. In case the injunction is granted a right holder is able to further apply to Roskomnadzor, an authority responsible for mass media and communications in Russia. After that Roskomnadzor identifies the hosting provider of the web resource in question and notifies it about the injunction, then the provider needs to notify the owner of a website. If the website does not remove the illegal content and hosting provider fails to restrict access to it, Roskomnadzor notifies the Internet access providers about the website in question with the aim of restriction access to it. (ibid.)

At the moment, according to Roskomsvoboda, a Russian community project supporting freedom of information online, more than 270 thousand resources were blocked due to the enforcement of court decisions and rulings, such as Roskomnadzor, however, several trends regarding current

website blocking legislation include excessive blocking and lack of proportionality in implementation of restrictions (2019, cited 01.01.2020).

3.1.1 Permanent website blocking

In case a single right holder appeals to the court two or more times regarding the same website, it can be blocked permanently since May of 2015 in Russia. The blocking principle restricts the access to the whole website, not a single webpage, and permanent nature means the site would remain blocked even after the removal of infringing content. Such a feature has been a subject to criticism as the parallel to criminal law was drawn where conviction expires after a certain period of time. (Nurullaev 2017, 212—217; Rassudov et al. 2018, 36.)

Despite that, this method has been used frequently leaving numerous websites permanently blocked, including most-visited BitTorrent indexes, such as rutracker.org, the most popular source of illegal content in Russia. Approximately 13 thousand users of Rutracker have appealed to the Moscow City Court's decision of permanent blocking. A few right holders distributing their works for free using the website have joined the appeal as well. The gist of appeal was the right of users to search, obtain and distribute legal content and the right of content creators to creative freedom. Nevertheless, the torrent tracker was blocked in November of 2015 due to the complaint of organizations representing music labels, even though Rutracker administration said to be cooperating with other right holders allowing them to take down the particular files they own. The appeal was declined on a basis of having no effect on the rights and interests neither users nor authors. (ibid.)

Before the block decision came into force, Rutracker decided to restrict the access for Russian users itself, displaying the instructions on how to circumvent the upcoming blocking instead of a normal interface. A half a year later, the website reported that it lost up to 50% of its users, however, a filesharing intensity reduced by less than 5% only. (ibid.)

Foreign video hosting services
YouTube, the most popular video hosting platform, has become a respondent in Russian courts too. Russian federal TV channel TNT has filed a claim against YouTube in relation to episodes of the series that TNT owns. (Rassudov et al. 2018, 33, 37.)

After several months of court proceedings, an amicable agreement has been reached and approved by the Moscow City Court on September 21 of 2015. The right to use Content ID, "YouTube's automated, scalable system that enables copyright owners to identify YouTube videos that include content they own" (Google 2020, cited 18.03.2020), were granted to TNT as a result of agreement, giving the channel ability to identify, manage and remove content it owns on YouTube. A press release about establishing the partnership was also released, making it an example of agreement between the right holder and online service. (ibid.)

French video hosting website Dailymotion experienced another decision of the court and was banned permanently in Russia on January 28 of 2017 due to application of TV channel Pyatnitsa. Negotiations about giving the right holder access to the tool similar to Content ID in order to remove infringing material started only after the blocking, and due to several factors, such as the expiry of period for appealing the court decision it remains unclear whether the website will be unblocked. (ibid.)

3.1.2 Excessive blocking and lack of proportionality

The excessive blocking may appear in two different scenarios. In the first case, collateral websites might be blocked as well, if, for example, restriction of access to a target website is based on its IP address which is shared among several web resources. Second scenario involves the blocking of a whole website in such a case where illegal content makes a minor part of it. (Nurullaev 2017, 217.)

Russian law lacks detailed guidance regarding blocking of websites due to copyright infringement. In cases of appeal to the Moscow City Court it can order either:
- blocking of a specific URL address,
- blocking of a whole website,
- blocking of the IP address the website is located at. (ibid.)

In case of permanent website blocking, the block covers a whole website, even if only a portion of it infringes the copyright. Without specification of the techniques the Internet providers should use in order to restrict the access to a web resource, some of the ways they choose might cause the excessive blocking. (ibid.)

As an example, using a filtering system based on DPI (deep packet inspection) allows to block a target web page by its IP address. Such a system may also lead to blocking the whole website and any other websites which may share the same IP address as well. In this case, a more particularized traffic filtering system may be a solution, yet a too expensive one even for the large Internet providers. (ibid.)

It is also stated that in case of preliminary website blocking the Internet access provider is allowed to block a whole website if it does not have a technical possibility to restrict an infringing part of it only. The aforementioned features may therefore produce a higher risk of excessive blocking. (ibid.)

3.1.3 Effectiveness of website blocking

In contrast with the European Union legislation, the actual effectiveness of blockings is not a legal requirement in Russia and there are doubts that the blockings have significant effect in terms of amount of copyright infringement cases. Depending on a specific website, the impact of a blocking may vary greatly. (Nurullaev 2017, 221.)

For example, in 2016 after the blocking of *flibusta.net*, a Russian most popular source for downloading electronic books, the number of its users decreased by almost 30% (making the user base less than 100 000 users). During the same period, however, the number of users of *flibusta.is*, a so-called mirror of the same website, increased by almost 38% (making the user base more than 3 million users). That clearly displays the increasing usage of methods such as mirrors and proxies among the users in order to circumvent the blocked resources. (ibid.)

On the other hand, the head of Roskomnadzor reported that website blocking and other copyright enforcement measures had a positive effect on the online video market and even increased it by 14.7% in 2015. Still, some right holders suppose the website blocking is not sufficient enough in terms of copyright infringements in Russia. The websites with illegal video content are still on a rise and seem to be considerably more popular than legal services, and their revenue is estimated to be up to $68.46 million a year. (ibid.)

Nevertheless, with swift development of copyright infringement legislation the several proposals are being formed which are focused on enhancement of website blocking measures and reducing of copyright infringement in general. Those proposals include:

- restrictions of domain name transfer for blocked resources,
- denunciation of advertisers involved in purchasing the advertisement on website with illegal content;
- increasing of liability of Internet service providers which do not manage to block the target resources;
- de-anonymization of BitTorrent trackers and file-sharing resources users. (ibid.)

Some of those proposals have already been practiced in the European Union. As an example, the campaign discouraging businesses from purchasing the advertising on copyright infringement involved resources was launched by police in London in 2014. (ibid.)

3.1.4   Anti-piracy legislation and content market state

According to the research of *J'son & Partners Consulting* company the digital content market in Russia started to grow before the adoption of anti-piracy legislation. By research assessments, the digital content market in Russia doubled its number in a period between 2011 and 2013, growing up to $2 billion. Share of Russia on the global digital market was estimated at 2 percent in 2013. Most of the content on the local market was a part of the game industry (91%), followed by video (6 %), music (2%) and books (1%). (Rassudov et al. 2018, 45—46.)

Development of infrastructure and multi-platform solutions for distributing content were named the main conditions for a digital market growth. According to study, the possibility of consuming high-quality content by means of using any available devices is able to motivate the users to use the paid services more. (ibid.)

Game industry

By analysis of the global and local game market done by J'son & Partners Consulting in November 2014, in a period of 2010 to 2013, the game market in Russia grew from $730 million to $1.83 billion. The annual growth of approximately 28 percent continued in the next three years, as stated

in the updated study of April 2017. The highest growth rate was spotted in PC and mobile segments, with the PC segment growing constantly and making up the base of the game market in general. However, in accordance with the researchers, the growth is not connected with the fight against digital piracy. (Rassudov et al. 2018, 45—46.)

Furthermore, data from Mail.ru Group, one of the biggest Russian IT companies and a shareholder of VK, also showed a significant growth for the period between 2010 and 2015 forming a leap from $158 million to $700 million. Nevertheless, the company experts did not connect the growth to the actions of the Moscow City Court aimed on copyright protection either. (ibid.)

Video industry

Data from online movie theaters, paid TV channels and TV stations that monetize their content online were taken into consideration in market analysis of digital video segment. A growth was spotted in a given segment as well, as, by the end of 2016, the size of a legal video market reached $159.3 million, amounted 32% leap compared to the previous year. (Rassudov et al. 2018, 47.)

Several reasons for the growth were named by the experts of the consulting company. An attention by the government to the industry (e.g. simplifying the process of issuing distribution certificates), a cooperation of TV service providers and content creators with digital movie theaters were among them. The experts also mentioned the expansion of Russian digital video services on the international market, production of original content and blocking of resources with illegal video content. (ibid.)

However, even though J'son & Partners Consulting called the blocking one of the reasons for market growth and change of the consumer behavior, no particular data was cited. (ibid.)

Music industry

Situation with the digital music segment was less promising by the opinion of J'son & Partners Consulting. Still, a 207% growth was also spotted in sales of music online in Russia between 2009 and 2010. Also, the most profitable share of music sales was the mobile content in 2011. (Rassudov et al. 2018, 48.)

The low purchasing power of customers, high cost of music distribution rights, and a lack of trust in services of online payment were named as barriers to the market growth of the online music segment. On the other hand, the rise of Internet user base (including mobile devices), decrease of user devices price, and new sales and cooperation models of recording companies were pointed out as the factors which may contribute to a dynamic growth in the segment. (ibid.)

Even though the researchers consider the illegal access to online music retarding for the legal industry, the fight against infringing content was not displayed as the main condition of market growth. Also, according to the results of a survey conducted by the International Federation of the Phonographic Industry, sales of digital music grew from $15.7 million in 2012 to $35.5 million in 2016, with music streaming being one-half of the online music market in 2016 in Russia. Moreover, the same year the whole digital music segment grew by 29%. (ibid.)

Book industry

In the period of 2010 and 2012 the growth from $834,9 thousand to $3.44 million was spotted in the e-book segment in Russia as well. The experts at J'son & Partners Consulting connected that to a growing e-book market and increased consumption of content using mobile devices. (Rassudov et al. 2018, 48—49.)

Changes in the market of user devices, development of infrastructure for content distribution, changes in policies of book publishers and measures against online piracy were among the factors that should contribute to the development of Russian e-book market. (ibid.)

By the end of 2014, according to Russian e-book library and store LitRes, e-book market in Russia continued to grow and reached the indicator of $12.83 million. As said by the company, the development of subscription models, "anti-piracy" measures and development of self-publication contributed to the segment growth. (ibid.)

3.1.5   Antipiracy Memorandum

However, Anti-piracy law was deemed not effective enough and the matter of digital piracy required a different approach.

On 1 November 2018 the Antipiracy Memorandum was signed between Russian major IT companies (Yandex, Rambler, Mail.ru, Ruform, Vkontakte) and copyright holders, that would be enforced by Roskomnadzor. The main purpose of this agreement is to allow companies to remove all illegal content, sources, torrent files as well as filter the search results without involvement of the court. Instead of directly blocking websites that violate copyright, the memorandum helps to remove all search results and links to the content. (Broadbandtvnews 2018.)

The secondary objective of this agreement is to propagate the respect for the copyright, encourage Internet users to purchase all digital content to support rightful copyright holders and inform Internet users about uploading and sharing of illegally obtained digital content and its repercussions. (ibid.)

The third objective is to create a registry of content and its copyright holders. According to the Memorandum, companies are obligated to monitor content. In case users upload content that belongs to the registry, the company has all rights to remove it. (ibid.)

3.2   Global license proposal

Another solution for securing the intellectual property in Russia was a global license proposal launched in 2014. Such the license was planned to be imposed on the ISPs through which the copyright-infringement activities are carried out. The legal right holders of involved works were to be compensated by respective Internet Service Providers. (Gaetano 2019, 162—163.)

At that moment, the Russian Union of Right-holders decided to make certain changes into the copyright enforcement legislation since it was dissatisfied with the current one. A global license proposal was planned to be one of those changes, and its idea was to allow Internet users to share and download creative works online with no restrictions, a minor fee (paid together with the internet access fee) was mentioned to be the only condition. The collected money was supposed to be distributed among the corresponding right holders with use frequency taken into consideration as well. (ibid.)

A draft of the law was originally published by the Ministry of Culture in February of 2014. The global license was planned to be controlled by a state-accredited collective rights management

organization (ACRMO) and was designed to cover music, literacy and video works, however, often-used software was out of the global license scope. All national and foreign works would be protected by the license without contacting the ACRMO on the matter. In case, the certain right holders refuse to participate in the license scheme, they can later exclude their works out of it. (ibid.)

Internet users should agree on a global license at the same time they enter the Internet access agreement with the provider. The internet access providers were set to be responsible for collecting the license fees from users and further transferring it to the ACRMO, which later distributes the funds among the right holders. (ibid.)

The global license idea was supported by the Ministry of Culture, collective right management organizations and certain right holders. On the other hand, the scheme had brought the opponents such as Federal Antimonopoly Service, several other Ministries and internet companies. (ibid.)

3.2.1 Arguments in support

Inadequate monetizing of right-holders' works online was the main reason to put the global licenses forward. That was happening due to several reasons:
- illegal content used frequently by the users;
- websites owners publishing the illegal content themselves in order to profit directly or indirectly from advertising;
- Internet access providers profiting indirectly from illegal content;
- search providers profiting indirectly by giving users the access to illegal content. (Gaetano 2019, 163.)

Hence, in case of the global license implementation it could benefit the stakeholders by simplifying the interaction with right holders and decrease the amount of legal procedures in regards of copyright infringement. Both frequency of usage and revenue amounts were supposed to be increased for the right holders, creating more space on the market resulting in a better competition based on quality of the services among the content publishers. (ibid.)

Overall, the global licenses were thought as a better alternative to the conventional IPR legislation, including the aforementioned anti-piracy law. (ibid.)

3.2.2   Arguments against

On the contrary, the opponents of global licenses also had several concerns. To begin with, the global licenses were not supposed to cover all the creative works. In that case, putting the responsibility of license control only on a single collective right management may cause trust issues since such organizations sometimes are believed to have a lack of transparency. (Gaetano 2019, 163—164.)

The negative consequences should fall on Internet service providers too, as the need for huge expenses would rise after the adoption of global licenses. These expenses should be able to cover the establishment of a non-existing yet system for analyzing the use of creative works online, collecting and further storing the data. As it was estimated by the Ministry of Communications, in case of establishing such a system, all money accumulated from the licenses would cover the expenses only after 10 years of the project running. Impossibility to distribute the collected funds fairly among the right holders was another concern. It would happen due to technical difficulties of counting the number of cases when the works are being used. (ibid.)

Opponents of global licenses have also noticed that in case of scheme adoption it would infringe legal rights of the Internet users as such a scheme assumed the use of more penetrating monitoring techniques, infringing users' personal life. The fact that ISPs would need to transfer the user data to the ACRMO also suppose the infringement of users' privacy. (ibid.)

Payment difficulties were also expected as a notable number of users could find themselves paying the fees several times, as licenses were not to be granted on a basis of internet user, but an internet access agreement. By that, for example, a same person would need to pay a fee separately for each device they use. (ibid.)

Finally, it was mentioned that the whole concept of global licenses was done according to a false assumption that using the content online is always illegal. The global license scheme did not take

into account that a significant portion of online creative works are either free to use, used with the permission of a right holder, or under open licenses. (ibid.)

Eventually, as reported by the Russian media, the global license proposal was cancelled in June of 2015 (ibid).

3.3 Position of information intermediaries

In order to estimate the influence of copyright related court proceedings on information intermediaries a survey was conducted in 2017, in which 3 hosting companies agreed to participate in. (Rassudov et al. 2018, 38—39.)

The respondents were unanimous in terms that hosting providers do not control the content that is being posted on the websites of their clients, hence there is no need for them to participate in cases to protect authors' and related rights and they cannot be held liable for violating them. All of the survey participants also responded in the same way regarding a specific demand to "stop the creation of technical conditions providing for the posting" of infringing content, which is often given by the Moscow City Court in cases regarding online copyright infringement. The hosting companies noticed that such a demand is not technologically possible, and that such a wording may even be used by the right holders to pressure the hosting companies. Moreover, by the reply of one of the participants, the lawyers of the right holders' side often resort to bribery. (ibid.)

Generally, respondents' replies shown that aniti-piracy decisions do not affect on hosting providers' client approach in a significant way, but is still assessed by them in a negative way (ibid).

3.4 Piracy in Russia from the US point of view

A Special 301 Report is conducted annually by the Office of the United States Trade Representative (USTR). The report is aimed to determine whether the US trade partners, practically all the countries all over the world, are able to "provide adequate and effective protection and enforcement of U.S. intellectual property (IP) rights". Being one of the major markets and content producers globally, the United States provides a convenient tool that allows to estimate a current scale of copyright infringement in the world, as well as in Russia in particular. (USTR 2019, 5.)

In the 2019 report, USTR reported that there were certain positive changes compared to the previous year in Russia, however, the overall IPR enforcement situation is still said to be "extremely challenging". The burdensome legal procedural requirements and strict documentation continue to hinder the right holders, especially the foreign ones. Ineffective ways of copyright protection keep harming the legal market of digital content in Russia and abroad. Notwithstanding the anti-piracy legislation, a significant amount of piracy among audio, video, printed and gaming industries is still reported by stakeholders. The usage of mirror sites to access the illegal content remains high as well. (ibid.)

Anti-piracy memorandum was referred by USTR as a right decision, but a certain doubt regarding its further implementation was mentioned due to the original expiration by September of 2019. However, the Memorandum was recently reported to be prolonged until January of 2021 (Tass 2020).

To sum up, the lack of "sufficient staffing, expertise, and the political will to combat IP violations and criminal enterprises" were the main concerns of the USTR and their recommendation was development of a more effective and transparent enforcement strategy in terms of copyright infringement. (USTR 2019, 59—60.)

4   PIRACY RELATED SERVICES AND ELEMENTS IN RUSSIA

Despite the fact that Russia tends to fall behind the EU and USA in copyright law and protection, there are organizations that help people secure their profits from illegal distribution and remove sources of income for pirates. This chapter not only focuses on such agencies but also presents main sources of piracy and income of pirates.

4.1   Channels for content distribution

The architecture of the Internet and the various examples of currently existing software that is designed to restore access to resources online make the measures intended to fight the illegal content online, such as website blockings, less promising (Rassudov et al. 2018, 50).

The website blocking process was initially presented to right holders and Internet users as an effective tool against the infringement of exclusive rights online. However, in case of copyright infringement and subsequent blocking enforcement, the online resource is getting blocked only within the territory of the Russian Federation, having no impact on website's working capacity abroad. Hence, the restriction is caused to Internet users, rather than the owners of the website in question. (ibid.)

As previously mentioned in subchapters 3.1.1 and 3.1.3, instead of trying to appeal the decision of the permanent access restriction, large file-sharing websites, such as *Rutracker* and *flibusta*, decided to focus focus on the following measures:

- Distributing information about the ways to circumvent the blocking of a restricted website among its user base (case of *Rutracker*);
- Creating mirror-websites (case of *flibusta*);

Other measures included creating a bot in Telegram messenger in the case of *flibusta* and creating the branches of both websites on *TOR* and *I2P*, the networks allowing censorship-resistant and anonymous communication. (ibid, 53.)

By the usage of such measures, resources that got permanently blocked in Russia are able to maintain the stable workflow of the resources and keep their user base active (ibid).

4.1.1   Telegram

Telegram is one of the most popular message and voice over IP services in Russia. Despite the fact that Russian government attempted and failed to ban the usage of this messaging service on the territory of Russian Federation in 2018, it still remained popular among Russian users. According to the research made by the company Mediascope, in 2019 Telegram's active user base is equal to around 20 million users. Other popular messaging services worth mentioning include WhatsApp (70 million users monthly) and Viber (36 million users monthly). (Vedomosti 2018.)

On 16 April 2018 Roskomnadzor attempted to close the access to Telegram for Russian users. However, the process backfired and resulted in a temporary termination of access to legitimate websites on the Runet as well as thousands of IP addresses that belong to Amazon Web Services and Google Cloud. This process failed the blocking of Telegram and resulted in $2 billion losses to the Runet Internet Industry while Russian users were still able to use Telegram without restrictions or by using VPNs. (TASS 2018.)

However, this service gives a great opportunity for pirates to share illegal content among users. In fact, this service is so unmanageable and popular in the Russian segment of the Internet that it is considered one the biggest sources of piracy on the Runet. (Vedomosti 2020.)

Several hundred channels on the Telegram share illegal content with around 2 million users. The most popular content shared on the Telegram is mostly films, music and literature, which includes books, manuals, articles and business guides. Due to the piracy of digital copies of books publishing companies and right holders suffered monetary losses of around $1.24 billion. (ibid.)

To share content pirates usually compress files so that they would weigh no more than 1.5 Gb or utilize cloud services like Google Drive or Yandex Disk. By using a link that The Original Posters posts in the chat, followers can access the cloud drive where they may download the content. Very often such links are reported to the company which leads to the closure of mentioned cloud drive. However, due to the fact that Russian government outlawed usage of this service, right holders cannot sue or request immediate removal of their stolen content shared on Telegram channels. (ibid.)

Additionally, there are Telegram Bots that allow users to browse and download content via Magnet or torrent link without need of accessing torrent tracker itself. Such bots provide all features of normal torrent tracker and allow Telegram users to download illegally shared content even if the torrent tracker cannot be accessed via browser. (The Outline 2018.) r

Telegram chats can be utilized as a cloud drive and store gigabytes of content that can be shared with thousands of users. It is an amazing feature of this service and it has no upper limits on how much data you can store. Telegram API and BOT API allow users to create their own clients and bots to suit their needs. In addition, those tools could be utilized to create bots that can distribute content. For example, library bots that can find books in its database, based on the input made by the user and let the user download it. (ibid.)

4.1.2   Torrent trackers

Despite all attempts to control and persecute torrent websites in Runet, they are still easily accessible and widely used by Russian Internet users. Some of the Russian torrent trackers actively cooperate with copyright holders, while others stubbornly refuse to do so. The most popular Russian torrent trackers include:

1. *Rutracker.org* (formerly Torrents.ru)

   - Tracker was permanently blocked according to the amendments to Anti-piracy law in 2015 and was inaccessible due to the DDOS attack.
   - Created several mirrors and is still active today.
   - Has an official Telegram bot.
   - Torrent tracker does not require registration to download content.

2. *Rutor.org* (formerly FreeExchange.ru)

   - In 2015 Swedish provider prq.se set the tracker in ''clienthold'' condition, making it inaccessible to the tracker users.
   - Currently available at rutor.info address and its mirror rutor.is.
   - Torrent tracker does not require registration to download content.

3. *NNM-Club*

   - Russian torrent tracker that hosts books, software, films, anime and music.

- Requires registration to access all available content.

- Follows legislation of the Russian Federation and blocks content that violates copyright.

- Has a non-official Telegram bot that shares torrents via Magnet links.

4. *MegaPeer.org* (formerly Unitracker.ru)

- Main content is Films and tv series.

- In 2014 was persecuted for violation of copyright laws.

- Does not require registration to download content.

Most torrent trackers usually have common global rules that prohibit uploading of licensed Microsoft and Mac OS, pornographic materials and content in foreign languages. There are also several torrent trackers that only host a specific type of content. For example, *Kinozal.tv* focuses on films and tv series, *Tapochek.net* hosts mostly video game content. (Wikireality.ru 2020.)

4.1.3 VK

Vkontakte (VK) is the largest social media in Runet, second popular website in Russian Federation and 13th most popular website on the Internet with total visits counting around 1.6-1.9 billion per month (SimilarWeb 2020). Initially, it was developed as a network for students by Pavel Durov in 2016. Students could sign up by using an invitation and confirming their name. A month later the registration process became available for everyone and popularity of the website started to steadily expand and by the end of 2010 the number of registered users was reaching 100 million. Vkontakte was repeatedly accused of copying Facebook designs but with time website developers turned it into an original and ergonomic website. (Seoded.ru 2020.)

At the moment when rights on VK development and management belonged to Pavel Durov, there were no measures attempted to check if uploaded content was pirated or not. Mostly it was because of Pavel Durov's politics regarding freedom of information and support of piracy. Functionality and usefulness of VK to people were claimed to be the first priorities of Pavel Durov at the time. (ibid.)

VK users were free to upload absolutely any kind of information to the website and freely share it among users. The most common pirated content on VK were music, books and films. In 2014 MPAA and RIAA declared VK as the first website in the list of copyright offenders (Rbc.ru 2014).

However, Vkontakte made several attempts to gratify right holders and several attempts to protect copyrighted content. For example, in 2010 Vkontakte granted TV channel *TNT* a right to delete illegal videos which resulted in removal of around 100 thousand illegal videos. In 2013 company *Gazprom-Media Digital* and Vkontakte agreed about monetization of videos through advertisements which allowed rights holders to upload their content to Vkontakte to replace illegal copies and earn the funds via ads. During December 2013 company Star Media made their videos available on VK platform and monetized it via advertisements. (ibid.)

In 2014 Durov was forced to sell part of stocks to mail.ru, which already owned a large part of it, by the Russian government because he refused to implement political censorship. Pavel Durov then fled Russian Federation and continued his work on Telegram. (Vedomosti 2014.)

After Mail.ru started managing Vkontakte they started to think about profits and to secure profits and satisfaction of foreign rights holders they had to implement stricter protection of copyright. (ibid.)

In 2018-2019 Mail.ru signed an Antipiracy Memorandum with several publishers in order to prevent pirates from sharing illegal content. To identify illegal content Vkontakte started to check uploaded content through Copyright Check. This Copyright Check would allow users to upload files only if they have no special Digital Signature that illegally obtained copies of books have. The downside of this system is that it only checks content on VK platform and does not protect side sources on the Internet. (Vedomosti 2019.)

In 2014 several foreign music studios complained about piracy on VK and demanded compensation of $697.12 thousand and removal of all illegal copies on the platform. To avoid all further conflicts with right holders Vkontakte implemented paid music service. For a small payment it would allow users to listen to music uploaded to the platform and at the same time support content creators. (Piratemedia 2015.)

Over the years Vkontakte made a lot of effort to minimize losses from piracy that content creators suffer, however there are still ways for pirates to share illegally obtained content. That only means that VK needs a lot of improvement to secure the profits of the right holders.

4.2   Anti-piracy agencies

Originally, in the USSR all artistic content was copyrighted at the moment of its creations without any need for registration. However, with an increased amount of foreign content coming to the USSR and complaints from foreign right holders it became clear that protecting copyright was profitable for the government. In 1973 the USSR government formed Universal Copyright Convention as the first governmental agency that protected copyrighted content. (Wikipedia 2020.)

During the Perestroika period in the 1980s the government started losing total control of monopoly on issuing the copyright and after the dissolution of Soviet Union it led to the creation of Russian Author`s Society in 1993. This government agency has been protecting copyrighted content since 1993 but discredited itself multiple times and lost its reputation. However, there are multiple non-governmental agencies that nowadays protect profits of copyright holders. (ibid.)

AZAPI

AZAPI (Internet copyright association) represents one of the agencies that monitors the Internet and deletes all links and sources that violate copyright in Russia. Their primary focus is content that gets illegally shared on the Runet which AZAPI removes to secure profits of copyright holders. Besides searching for illegal content, AZAPI provides juridical services to their customers and helps them in the court. The employees of the association are claimed to be competent both in legal and IT fields, allowing them to provide the investigations of copyright infringement to their customers as well. (Azapi 2017.)

The notable achievements of AZAPI are the closures of the several popular pirate websites that managed to become more popular than legitimate sources. In addition, they successfully manage to protect copyrighted content on VK.com, the most popular social network and one of the most notorious sources of digital piracy on the Runet. (ibid.)

Copyright.ru

Copyright.ru is another example of an agency that protects copyrighted content in Runet. This agency represents several organizations (e.g. n'RIS and Copyrus) that are engaged in implementation and protection of copyright. (Copyright.ru 2020)

Copyright.ru provides multiple services related to protection of information. Such services include:

- digital escrow services
- copyright registration
- pseudonym, company, brand, band name registration
- consultation and guidance related to protection of the copyright

4.3   Ad revenue

One of the most significant sources of income that allows pirate websites to exist on the Internet is advertisement. Numerous huge brands purchased advertisement of their products on illegal or untrustworthy websites. Among these companies are Nissan, Microsoft, Gillette, Toyota and other recognizable brands. It is important to recognize the fact that by supporting illegal content sharing websites these companies support ad-sponsored content theft and steal work from legitimate advertising agencies. (Digital Citizens Alliance 2014.)

The desire to acquire free digital content always supports high traffic on such websites that in turn provides a decent turnover of advertisement. According to the studies the annual income of advertising on pirate websites globally is around $227 million and on the Runet this number is around $70 million. Large torrent websites generate around $6 million and even smaller pirate websites can generate from $100 thousand to $3 million from advertising annually. (ibid.)

Due to the fact that pirate websites have no need to purchase content and relatively high user traffic they have very high profit margin - up to 95%. It allows illegal content sources not only cover all server costs but also gain enormous sums of money despite the fact that they share content for altruistic purposes as they claim. (ibid.)

Since 2001 Russian segment of the Internet has been a safe and unregulated space for people to profit off illegally shared content. Despite attempted measures of controlling content pirates have

made enough profit to keep their websites running and attempt to counter all anti-piracy laws and measures. In 2017 the largest video sharing website with an approximate traffic of 1 million users per day generated around $2.7 million and an average website with a traffic 250 thousand people can generate around $540 thousand. (ibid.)

Group-IB calculated that average websites that host illegally shared content can generate up to $121.53 thousand annually. The main sources of income for these websites are usually crowd funded money via PayPal, premium subscriptions and advertisements. (Ruvod 2017.)

Ad revenue is still a main source of income for pirate websites in Russian segment of the Internet. Anti-piracy groups attempted several measures to prevent corporations from purchasing advertisements on websites that host illegal digital content, even though confronting advertising agencies was quite successful it did not scare off all of them and they continued to cooperate with pirates.

In the table below are listed some popular pirate resources in Runet during 2017 year. The table shows correlation between traffic and money made by pirates.

Table 1. Profits of pirate website in Runet. (Ruvod 2017)

Websites	Traffic (Users/day)	Profits (Thousand Dollars)
Seasonvar.ru	1 000 000	2 700
My-hit.org	397 000	945
HDrezka.me	315 000	932
Kinokrad.co	271 000	806
Baskino.Club	234 000	553

5   DIFFERENT APPROACHES ON DIGITAL PIRACY

Being a broad topic, digital piracy is rendered by different opinions. Moreover, different approaches are used when it comes to piracy online. Whether it actually creates barriers for the consumption of legal content and what are the alternative ways of securing online content will be observed in this chapter.

5.1   Creative Commons as an alternative method of protecting the intellectual property

Besides the default copyright protection, there are companies devoted to expanding the legal use and reuse of creative works online. *Creative Commons*, an American non-profit organization, represents one of them and offers several copyright-based licenses available for the public.

A Creative Commons (CC) license is a kind of public copyright license that is used for free distribution of creative works. CC licenses allow content creators and right holders to offer limited usage rights to the public, while reserving the other rights at the same time. (Creative Commons 2020, cited 09.04.2020.)

Compared to the regular "All Rights Reserved" copyright approach, these licenses are aimed at a more flexible usage, allowing the creators to pick a license of their choice. Creative Commons offers the creators several alternatives within a spectrum between reserving all the rights, similar to basic copyright, and relinquishing the rights -- an approach called "Some Rights Reserved". (ibid.)

Creative Commons offers a core suite of six copyright licenses:

- Attribution (**CC BY**)

Allows other people to distribute, remix, adapt, and build upon the original work (including the commercial purposes) as long as the original creator is provided a credit. Such a license is recommended for maximum dissemination and use of licensed materials.

- Attribution-ShareAlike (**CC BY-SA**)

Allows other people to distribute, remix, adapt, and build upon the original work (including the commercial purposes) as long as the original creator is credited and identical license terms are used. Such a license is used by Wikipedia.

- Attribution-NoDerivs (**CC BY-ND**)

Allows any kind of work reuse with credit provided, besides sharing in adapted form.

- Attribution-NonCommercial (**CC BY-NC**)

Allows any non-commercial work reuse with credit provided.

- Attribution-NonCommercial-ShareAlike (**CC BY-NC-SA**)

Allows any non-commercial work reuse under the identical license terms and with credit provided.

- Attribution-NonCommercial-NoDerivs (**CC BY-NC-ND**)

Works cannot be changed or used commercially and credit must be provided. (ibid.)

CC licenses may be applied to any type of creative work, including educational resources, music, photographs, databases, government and public sector information. Computer software and hardware are the only categories CC licenses are not recommended for. (ibid.)

Use of Creative Commons licenses in Russia

As for version 3.0 and earlier, CC has offered so-called ported versions of its core licenses based on local jurisdictions of target countries. However, the currently latest version 4.0 has been drafted with the attention to international enforceability and is supposed to be used effectively worldwide. (Creative Commons 2020, cited 09.04.2020.)

Creative Commons licenses are used by many websites, blogs and organizations in Russia. The most notable examples would be the official web resources of several region administrations in Russia. Moreover, even all the content published on *kremlin.ru*, the website of the Russian president, is licensed by International Attribution license of version 4.0 (CC BY 4.0). (CreativeCommons.ru 2020, cited 09.04.2020).

5.2   Displacement rate of copyrighted content

It is difficult to calculate the amount of content consumed illegally worldwide, but in 2014 the European Commission published a research that showed approximate percentages of illegal content that displaces legal consumptions. (Van der Ende 2015, 117-148.)

The study made in 2014 shows that the displacement rate of digital content is insignificant, furthermore illegal consumption of digital content sometimes led to increase of legal consumption. The estimated displacement rate for music was insignificant, due to the fact that musical bands get most of their income from concerts. For films and shows the estimated amount of displacement of digital content was around 40% percent, which meant that every ten legal consumptions of content, there were 4 illegal ones. (ibid.)

However, the displacement rate for video games was positive, although companies make use of tactics that convert illegal consumers to legal ones. It is also implied that a lot of users download illegal copies of video games for testing purposes and if their expectations are met, they support the developers. A few video game developers utilized torrent websites to promote their own games, so that those who could not or were not going to buy the product could test it and give it publicity and increase the overall sales (Cube – Medium 2017).

Another study made in 2018 showed a noticeable correlation between piracy and legal consumption of digital content. According to the study, illegal consumption leads to an increase in legal consumption and vice versa. The study also shows that people that consumed digital content through illegal sources were more likely to purchase digital content from legitimate sources than those who do not consume illegal digital content. (IViR 2018, 71—79.)

5.3   Digital Piracy as an 'invisible' competitor

Digital Content Market, as any other market, can suffer from the influence of monopolies. The monopolies on digital content rights cause an effect that can be called Double Marginalization, which increases costs of content made by manufacturers and retailing prices while also decreasing demand on this digital content. In this situation all three parties (retailer, manufacturer and customer) suffer losses and the only solution to these problems is a decrease of prices set by the manufacturer that holds copyrights.

However, in such cases the negative influence of piracy might actually solve the problem of Double Marginalization and benefit manufacturers, retailers and their customers. The study published by the University of Indiana proves that the presence of piracy pushes company-manufacturers to sell their product at lower price to retailing companies which results in lower prices set by retailers. (Kim 2018, 1121-1129.)

The presence of piracy as an 'invisible' competitor forces companies to pay extra attention to satisfaction of their customers due to the fact that they can always find Illegal digital content on the Internet. The illegal content also serves as a sampling method which might encourage people that obtain content via illegal channels to make a purchase from a legitimate retailer if they are satisfied with the quality of the content or want to support it. It is also proved by the study (IViR 2018, 71— 79) that many Internet users that occasionally download illegal digital content are more likely to support the content creators. (ibid.)

The other method to decrease the success of Illegal digital content distribution might be achieved through heavy legal measures which can be very expensive and before utilizing them even bigger losses of profit must be considered before joining the antipiracy movements. Such decisions might only motivate pirates to adapt to new legislations thus rendering them useless. (ibid.)

6   CONCLUSION

The purpose of this thesis was to present the piracy of digital content in Russian segment of the internet, how this piracy affected the market of digital content and ways of distribution of illegally obtained content. With the help of several researches and reports we presented the current status of digital piracy in Russia and the attitude of people towards consumption of digital content.

Historically it happened that Russian Federation was always behind the EU and America to adapt and implement protection of copyright. However, with the rising amount of digital content people produce on the Internet and displeasure of foreign right holders it was necessary to take certain actions against Internet piracy.

A long history of implementation of Anti-piracy law in Russia demonstrated its both weak and strong sides. Being rather a raw and unpolished tool at first, it caused several difficulties to the work of legal segments of online content and its users. However, the original initiative of fighting the infringing content online was still wise and later it transformed to a more successful memorandum, making it easier for content creators and right holders to secure and monetize the content they possess without losing enormous funds due to the actions of digital pirates.

Sometimes the methods used against the piracy online were in correlation with the ones used in European Union. For example, the global licenses that failed as a concept not only in Russia. The certain data on Russian digital piracy from abroad is included in the thesis as well. The paper encouraged the state's constant fight with illegal content, though still calling it one of the most notable sources of pirated content.

Since 2015 the digital piracy market in Runet was steadily growing until 2018 - from $32 million to $87 million. But with recent changes in politics and implementation of new ones, the market finally started to decline - from $87 million to $63 million. (Group-IB 2019.)

This data shows that Russian Federation started actively fighting digital piracy to encourage people to purchase content via legitimate channels and support content creators. However, there are still many platforms and media that pirates utilize to share illegally obtained content. Such channels will

require different approaches and ways of control to minimize losses which the market will suffer from illegal content distribution.

To sum up, we would like to say that judging from the work we have done we think Russia is on the right track as more and more attention is being paid to the digital market and ways of securing it. Even though the amount of digital piracy is still fairly high, new initiatives and methods regarding intellectual property online are getting worked out every year. Taking into account the size of the state and possible difficulties on different layers of management, we believe that situation is getting better overall, and Russia does contribute to the global fight against digital piracy.

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