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Copyright Questions in Computer Games and the New Models of Distribution

“The future of media is here – it’s just not evenly distributed.”
William Gibson¹

Abstract

Gamers in Western Europe and in North America can afford to pay for original and brand new computer games, but in Eastern Europe the end-users try to choose cheaper options, such as buying used softwares or download the games from torrent sites. Until the games, which were being sold in video game stores, had not have affordable alternatives, the solution was the file-sharing. From now on, due to the new digital distribution systems, there are alternative ways which is a *zero-sum game* situation for both the end-users and the copyright holders. This essay tries to demonstrate the development of the market of computer games. It also introduces how the distribution chains have been changing since the first new application, the Valve’s Steam was invented.

Introduction

The flourishing of the computing technologies in the XXth century generated the development of softwares and further and ever generations of hardwares, because the smarter and faster graphic engines demanded bigger computing capacity.

If we are talking about platforms, those are only hardwares. The essence of softwares is that they entertain the owners. The most dynamically growing business branch² produce the entertaining softwares. These softwares reach the end-users on a long distribution chain.

Due to the internet, this value chain changes permanently. The world wide web is the most natural and, compared with the previous sales platforms, the most obvious space for distributing digital products.

This phenomenon was recognized and understood by the management of Valve,³ when they invented the well-known Steam, which is a digital distribution platform. The Steam, the

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¹ C. DIXON, *Lessons from the PC video game industry* <https://medium.com/software-is-eating-the-world/lessons-from-the-pc-video-game-industry-3350bb7713de#50quhmk6> (last visit September 12, 2016).

² In 2013 the trade of the software industry became mass media products and the trade exceeded 13 Billion USD. One part of this amount came from subscriptions, the other from advertisements located in computer games and from the sells of digital or phisical copies of the work. In November 2015 the Call of Duty Black Ops generated 3 550 Million Dollars income on the first weak after its release. More than the block buster of that summer, tha Jurassic World, which generated “only” 512 Million Dollars. In England the Halo 5 brought 7,7 Million USD, while the movie James Bond Spectre reached only 6,3 Million Dollars income on the weekend of its first performance. See: S. JÖCKEL, A. WILL, F. SCHWARZER, *Participation Media Culture and Digital Online Distribution – Reconfiguring the Value Chain in the Computer Game Industry*, *The International Journal on Media Management*, 10. 2008. 102.; as well as J. PARSON, *Video games are bigger than Hollywood: Call of Duty becomes highest-earning entertainment release of the year* <http://www.mirror.co.uk/news/technology-science/technology/video-games-bigger-hollywood-call-6811936> (last visit September 11, 2016).

³ The Valve Corporation (<http://www.valvesoftware.com/>) is an American video game software developer which also provides digital sale services. It is famous for the Half Life, Counter-Strike, Day of Defeat and the Left 4 Dead. Beside operating the Steam, they developo the so-called Source engine, which consist of character animations, artificial intelligence, realistic physical modelling. It is available for other computer software developers. Seeing the succes of the Steam, Valve is working on its own game console, the Steam Machine. See: <http://www.valvesoftware.com/company/> Downloaded: 10 September 2016. As well as: J. OSBORNE, Steam

Origin of Electronic Arts and the Ubisoft Club of Ubisoft are the new generation of distribution. They created a new, digital market, which will revolutionise the chain of sales and by the 2020's the consumer habits will be changed radically. This paper is going to discuss, whether digital distribution systems will reduce illegal file-sharing and solve other problems on the field of copyright law.

The legal status of computer games and the way to the digital distribution

It is a question, whether the computer games are works of fine arts or other protected creations. It is doubtless, there are some creative elements, which could make us think, computer games are protected by copyright law as artistic creations. These might be: audio (musical compositions, sound recordings, voice, imported sound effects) or video elements (photographic images, digitally captured moving images, animations, texts), and computer code (source code and object code) [primary game engine or engines, ancillary code, plug-ins comments].⁴

On the European level,⁵ the 2009/24/EC Software Directive⁶ defines computer programs in Article 1 as follows:

"(...) Member States shall protect computer programs, by copyright, as literary works within the meaning of the Berne Convention for the Protection of Literary and Artistic Works. For the purposes of this Directive, the term 'computer programs' shall include their preparatory design material."

"Protection in accordance with this Directive shall apply to the expression in any form of a computer program. Ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under this Directive."

"Computer program shall be protected if it is original in the sense that it is the author's own intellectual creation. No other criteria shall be applied to determine its eligibility for protection."

All this mean, even there are elements which could be protected as an individual and original work, they are parts of the software, which is completely protected by the Hungarian and European copyright regimes. Therefore it is not necessary to grant protection over the level which already exists. Furthermore this approach is clearly supported by the InfoSoc Directive.⁷ According to Article 1 (1) computer programs are protected under this regime, which means there is no reason to treat differently the indicated parts of the video game from the work as a whole.⁸ In the Nintendo Co Ltd v PC Boks Sz Srl case the European Court of Justice confirmed this point of view as follows: *"In so far as the parts of a videogame, in this*

Machine: Valve's PC-like game consoles explained <http://www.techradar.com/news/gaming/consoles/valve-steam-box-release-date-news-and-features-1127072> (last visit September 12, 2016).

⁴ A. R. G. de la Haza, Video Games: Computer Programs or Creative Works? WIPO Magazine http://www.wipo.int/wipo_magazine/en/2014/04/article_0006.html (last visit September 12, 2016).

⁵ According to the Hungarian Act of LXXVI of 1999 on Copyright Article 1 Section (2), "All literary, scientific and artistic creations are protected by copyright (...) in particular: c) computer program creations and the related documentation (...) whether fixed as source code, object code, or in any other form, including application programs and operation systems."

⁶ Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (Codified version) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:111:0016:0022:EN:PDF> (last visit February 28, 2017)

⁷ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:167:0010:0019:EN:PDF> (last visit February 28, 2017).

⁸ S. Corbett, *Videogames and their clones – How copyright law might address the problem*, Computer Law & Security Review 32 (2016) 618.

case, the graphic and sound elements, are part of its originality, they are protected, together with the entire work, by copyright in the context of the system established by Directive 2001/29."⁹

Having full scale of protection does not mean there are no possibility to infringe copyright. There are several forms of infringement. One of the illegal file-sharing activity, committed in the digital space. Downloading contents from for example the Pirate Bay could infringe the copyright of the rightholders by downloading, as it is considered to be reproduction, and if someone is seeding the content, it is considered to be making available to the public. Both rights belong to the group of economic rights of the rightholders. Doing it without permission infringing copyright.

Second hand sales of used softwares generated debates between rightholders and users. According to Article 4 Section (2) of the Infosoc Directive *"The distribution right shall not be exhausted within the Community in respect of the original or copies of the work, except where the first sale or other transfer of ownership in the Community of that object is made by the rightholder or with his consent."*¹⁰

This is the exhaustion of the right of distribution, which prevails in case of tangible copies. This formula can not be applied in case of digital contents, as they are considered to be services under the European copyright law. The Infosoc Directive expresses in (29) preamble: *"the question of exhaustion does not arise in the case of services and on-line services in particular (...) every on-line service is in fact an act which should be subject to authorisation where the copyright or related right so provides."*

At the same time, there is a famous decision of the European Court of Justice, the well-known *UsedSoft v. Oracle* case.¹¹ In its preliminary ruling the European Court of Justice said: *"the right of distribution of a copy of a computer program is exhausted if the copyright holder who has authorised, even free of charge, the downloading of that copy from the internet onto a data carrier has also conferred, in return for payment of a fee intended to enable him to obtain a remuneration corresponding to the economic value of the copy of the work of which he is the proprietor, a right to use that copy for an unlimited period."*¹²

All in all, there is a gap between the classical term of goods (works) and immaterial, digital contents considered to be services. This legal debate leads us to the second hand market of digital products and softwares, where we are looking for not only entertaining computer games, but for answers for the question, why are the users banned from buying second hand softwares? As digital contents are not considered to be a tangible goods or works, they are services, therefore it is impossible to gain traditional ownership over these products. Users can only license them, which also means, that the user is only titled to used it.¹³

For the problem of file-sharing and the second hand market, digital distribution could be one of the best solution. Underneath I am going to try to demonstrate how.

⁹ Nintendo Co Ltd v PC Boks Sz Srl CJEU, C-355/12 ECLI:EU:C:2014:25 para 23.

¹⁰ Article 23 Section (5) of the Hungarian Copyright Act says: "If the copy of the work has been put into circulation by the rightholder or by another person expressly authorised therefor by the rightholder through sale or the assignment of ownership in any other manner within the European Economic Area, the right of distribution – with the exception of the right of rental, lending and importation – shall further on be exhausted with regard to the copy of the work thus put into circulation."

¹¹ UsedSoft GmbH v Oracle International Corp. Case C-128/11, ECLI:EU:C:2012:407 <http://curia.europa.eu/juris/document/document.jsf?docid=124564&doclang=EN> (last visit February 28, 2017).

¹² C-128/11 Point 89.

¹³ P. Mezei, *Jogkimerülés a szerzői jogban*, Médiatudományi Intézet, Budapest, 2016, 135-139.

„Off-the-shelf software solution”¹⁴

Before we would describe what are the off-the-shelf software solutions, we have to outline, what is on the shelf.

One of the first video game of the world was the *Spacewar* of Steve Russel.¹⁵ The game was running on the PDP1, which was a three-refrigerator-sized computer. It was the first computer that was equipped with keyboard and screen. The *Spacewar* was an open-source software, which was improved several times by its fans.¹⁶ Nolan Bushnell was one of them, so he put a lot of efforts to improve it. The result was the *Computer Space*, which cost only 1000 Dollars, but 1500 copies were sold.¹⁷ Nowadays several 3D video games exist. Among them there are online role playing games, simulators and adventure games, real time strategies, action games, first person shooters and third person shooters.¹⁸ As the personal computers consist of the newest generations of hardwares, the biggest consols are also being refreshed in every five year.¹⁹

In order to make sure, the software will reach the end-user and the price will be received by the copyright holders, there has to be a data carrier and a marketing chain. In the seventies, huge data carrying capacity was not necessary. In the age of magnetic storages, the most widespread data carrier was the floppy.²⁰

In 1985 CD-Rom alternated Floppy Disks. First generation of optical storage mediums were followed by DVD-Rom in 1996. DVDs are widespread nowadays on PCs, on Playstation and on Xbox. Besides DVDs Xboxes are also supporting Blu-ray discs, which have bigger storage capacity.²¹ Although the size of the computer games has become bigger, there is no need for new generation of storing capacities. DVDs provide enough space for the products of video game industry. On the other hand, Blu-ray was not able to gain a foothold on the PC Game's market.

Extending capacity and mass production of the discs will be rendered superfluous by the digital distribution and the upcoming game-streaming technologies. Endless data can be stored in the “cloud”, which makes possible to download only the given part of the game. The only limit would be the internet bandwidth, but it evolves fast. If the streaming of copmuter games becomes a reality, traditional distribution models will become meaningless. After this transform the market of physical data carriers will be reduced and only the collector's editions, editor's cuts will be sold on the traditional way.²²

¹⁴ JÖCKEL, WILL, SCHWARZER, 2008, 104.

¹⁵ W. ISAACSON: *The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution*, Hungarian Edition: HVG Könyvek, Budapest, 2015, 205.

¹⁶ Ibid. 209.

¹⁷ Ibid. 212-213.

¹⁸ J. HURST, *12 Types of Computer Games Every Gamer Should Know About* <http://thoughtcatalog.com/jane-hurst/2015/02/12-types-of-computer-games-every-gamer-should-know-about/> (last visit September 10, 2016).

¹⁹ Since 1980, the following gaming platforms were developed: Atari 2600, 5200; Nintendo Entertainment System, Gamecube, Wii; Sega Master System, Genesis, Saturn, Dreamcast; Sony Playstation 1-3, Microsoft Xbox and 360. See: A. MARCHAND, T. HENNING-THURAU, *Value Creation in the Video Game Industry: Industry Economics, Consumer Benefits, and Research Opportunities*, *Journal of Interactive Marketing*, 27. 2013, 143.

²⁰ S. ITTERHEIM, *The History and Future of Video Game Distribution* (<http://www.learn-cocos2d.com/2011/12/history-future-video-game-distribution/> Downloaded: 10 September 2016).

²¹ Most widespread versions of Floppy-disk were the 3.5" (720 Kbyte-2,88 Mbyte) and the 5,25"-inch disks (360 Kbyte-1,2 Mbyte). Maximum capacity of CD-Rom was 700 Mbyte. DVDs are able to store six times more data (4,7 Gbyte). Blu-rays exceed the capacity stores more than 5 times bigger data than DVDs (25 Gbyte). The multilayered Blu-ray disk even bigger, they can store 50 Gbytes. See: ITTERHEIM.

²² Ibid.

The producers, the developers and the publishers had recognized the importance and advantages of the Internet, so they developed new models of distribution. Currently digital contents might be distributed through the Internet to the end-users, excluding the retailers and other intermediaries from the chain of distribution.²³ Between 2009 and 2011 the number of video games, sold on physical data carrier, reduced from 80% to 69 percent due to the new types of digital distribution.²⁴

Digital distribution is not unprecedented. Music industry experts predicted in 2009, that the market of digital contents will exceed the traditional with physical data carriers. This prediction came true due to iTunes, Spotify and other downloading and streaming services.²⁵ In September 2016 the number of subscribers of Spotify reached 40 Million.²⁶ In 2013 25 Billion songs were sold worldwide by iTunes.²⁷

In the traditional chain of commerce end-users are being served by console and hardware manufacturers, software developers, publishers and retailers. Platform producers are less affected by these changes, as their devices will be always essential for the enjoyment of games. The traditional chain builds on the wish of possession of the end-users, so the products are wrapped in fancy and exciting packages, with extra contents.

In case of softwares, the distribution chain starts with the publisher, which pays *platform royalty* to the console and hardware producers. The software developers also receive a share after the revenue. The retailer purchases the softwares from the publishers or the intermediaries. The publisher receives a particular and predetermined percentage of the retail price from the retailer, which can be even more than 80 percent, but in most of the cases this amount is smaller. The end-users can buy the products from the retailers.²⁸

A further problem is related to the limited storing capacity of the end-users' PC's hardware. After a hard drive is full, previous files have to be deleted, if the user would like to install a new program. On the contrary endless data might be stored in the cloud. Not to mention the fact, that the digital content providers and distributors operate server parks, where the multifunction is also possible.²⁹ At the same time, it is fact, that if the user subscribed for an online game, or purchased a game online, the content can be downloaded after uninstall again and again.

Disadvantage of the traditional chain is, that the works published physically gains extra expenditure, and the retailer shops can be visited only in opening hours, and the owners spend a fortune on rental fee and wages of employees. Meanwhile the digital market is always open, there is no reason to pay for the rent or the employee's salary of the retailer. Production costs are also lower due to the lack of packaging and physical data carriers. This argument is

²³ M. BERMAN-GRUTZKY, A. CEDERHOLM, *The Obstacles and Opportunities for Digital Distribution in the Video Game Industry, Today and Tomorrow*, KTH Computer Science and Communication, Master of Science Thesis Stockholm, 2010. 2. Electronical version: https://www.nada.kth.se/utbildning/grukth/exjobb/rapportlistor/2010/rapporter10/berman-grutzky_michael_OCH_cederholm_alexej_10124.pdf (last visit September 11, 2016).

²⁴ MARCHAND, HENNING-THURAU. 2013, 151.

²⁵ BERMAN-GRUTZKY, CEDERHOLM, 2010, 12.

²⁶ J. KAHN, *Spotify hits 40 million paid subscriber milestone, outpacing Apple Music's growth* (<https://9to5mac.com/2016/09/14/spotify-40-million-subscribers/>) (last visit March 2, 2017).

²⁷ D. ETHERINGTON, *Charting The iTunes Store's Path To 25 Billion Songs Sold, 40 Billion Apps Downloaded And Beyond* <https://techcrunch.com/2013/02/06/charting-the-itunes-stores-path-to-25-billion-songs-sold-40-billion-apps-downloaded-and-beyond/> (last visit March 2, 2017).

²⁸ Ibid. 9.

²⁹ Ibid. 16.

highlighted especially in the Eastern European countries, where the biggest blockbusters³⁰ are rather expensive compared to the average income at the time of first release.³¹

Price of games can be fixed or player can pay periodically. Mixed ways when the gamers purchase the software on a fixed price and later they subscribe online and pay monthly fee. There are *freemium* contents, where restricted contents can be unlocked by paying a smaller amount of money.³² *Early access* is also well known, which means the game is released when it is still under development. This type of distribution helps the developers with the opinions of the gamers who are testing the beta version of the game.³³

Virtual goods can be purchased not only for money but for virtual currency, moreover, in the future paying with cryptocurrency will be common. At this point the economies of virtual world will be in colleration with the real economy. Virtual assets of *Second Life*, *World of Warcraft* and other MMOs will change possessor not only for the virtual money of the game, but for real money. Later this income probably will be spent again on virtual goods.³⁴

Bitcoin is the most well know cryptocurrency, which is a virtual money with a virtual wallet. Transactions are public, known before the whole Bitcoin community, on the other hand the person of the sender and receiver is hidden behind a code. This is a significant difference compared to the traditional way of money transfer, which guarantees anonymity by keeping the data regarding the transfer in secret.³⁵ Nowadays we can pay with Bitcoin on several specialized websites or we can change it to another cryptocurrencies or money of virtual worlds. In these virtual “*stock exchanges*” exchange rate is determined by the demand, which means there is no constant central bank behind Bitcoin, which could determine monetary flows.³⁶

Digital distribution probably will reshape the structure of the computer games. Complete games are going to be sold in smaller packages, episode by episode, levels by levels for smaller amount of money.³⁷ This could reduce the market-price of the software, and also attract end-users. At the same time there is a real risk that after the purchase of the first part of the game, the following would be not purchased, because the gamer would not willing to spend money on the next episode.

Further, and from copyright aspects one of the biggest advantages of digital distribution, is that it is a quite attractive alternative to P2P file-sharing. Those, who downloaded protected works from illegal sources so far, justified their acts by claiming, that using torrents is cheaper and faster than purchasing the game. If there are better alternatives of cheapness and fastness on affordable price, the original contents would be purchased by the end-users.³⁸

The new models reshape not only the traditional distribution, but levels up the social gaming experience. The end-users – who have already had the possibility to get into interaction with

³⁰ See the list of top 50 video games: D. SMITH, The top 50 video games of all time, ranked <http://www.businessinsider.com/top-50-video-games-all-time-ranked-2016-12/#50-mike-tysons-punch-out-1> (last visit March 2, 2017).

³¹ Reforming the traditional distribution chain and its importance was recognized by other industries, such as IKEA. In favour of the cost-effectiveness and reduced prices, they simply left the assembly of the furnitures to the consumers. See: BERMAN-GRUTZKY, CEDERHOLM, 7.

³² MARCHAND, HENNING-THURAU. 2013. 148.

³³ M. CECL, *Rules for Value Modelling in Online Digital Distribution: the Video Game Industry*. Working paper, Available at: http://www.csw.inf.fu-berlin.de/vmbo2014/submissions/vmbo2014_submission_10.pdf (last visit September 13, 2016).

³⁴ D. ESZTERI, *A World of Warcraft-tól a Bitcoin-ig: Az egyén, a gazdaság és a tulajdon helyzetének magán- és büntetőjogi elemzése a virtuális közösségekben*, Doctoral Dissertation, University of Pécs, Faculty of Law, Doctoral School, Pécs, 2015, 162-163.

³⁵ Ibid. 71.

³⁶ M. TÜZES, *Bitcoin – A pénz új formája*, Infokommunikáció és Jog, 2012/4, 157.

³⁷ Ibid. 18.

³⁸ P. MEZEI, *A fájlcsere dilemma, A perek lassúak, az internet gyors*, HVG-Orac, Budapest, 2012, 252.

other players due to the multiplayer mods of several games – will become part of the marketing chain. Due to the *participator media* gamers are becoming content providers (*modders*), who create new levels, missions, characters, units, musics for the given program (*user generated content*), which contents will be shared with other users in the social networks.³⁹

Steam, Origin, Ubisoft Club

The Valve's Steam is a content platform and downloading service, offering digital rights management and it is one of the most successful online distribution channel.⁴⁰ It was launched in 2002 in order to make available the patches and mods created for their games to the end-users.⁴¹ This feature is one of its significant service yet. Valve is interested in the business of entertaining softwares not only as developer, but as an actor on several parts of the distribution chain. They are offering their own products, and many other softwares of other developers and publishers.⁴² Beside digital goods, they are running an integrated billing and paying system. The server park, which are protected by different security mechanisms, makes Steam more attractive.⁴³

In October 2013, Steam had 65 Million active users.⁴⁴ In January 2014, 75 Million,⁴⁵ in November 2015 125 Million user joined to the community.⁴⁶ These numbers illustrate well the rapid development of Steam. Meanwhile around 4.500 games and more than 400 Million user-generated contents were available. From the sales of other publisher's games, the Valve receives roughly 30 percent share. The company reached 1,5 Billion Dollars profit in 2014.⁴⁷ Beside buying digital contents on Steam, we can also activate our packaged games bought in a retailer shop.

Seeing the success of Steam, the Electronic Arts, one of the leading developer and game-publisher of the world, launched the Origin, its own digital distribution system and client software in 2011. Origin is not unprecedented. In 2005 EA had already developed an online downloading service, which offered Battlefield 2: Special Forces for download.⁴⁸ It makes available the products of the company, such as FIFA, Battlefield, Star Wars Battlefront, the Sims, Sim City, Need for Speed. amelyen főként saját készítésű és kiadású játékokat (FIFA,

³⁹ JÖCKEL, WILL, SCHWARZER, 2008, 104.

⁴⁰ Ibid. 106.

⁴¹ A. W. EICHNER, *Game over, insert coin to continue: Entertaining a new era of video game intellectual property enforcement*, IDEA: The Intellectual Property Law Review, Vol. 53, No. 1, 2013. 129.

⁴² JÖCKEL, WILL, SCHWARZER, 2008, 108.

⁴³ Ibid. 109.

⁴⁴ D. COWAN, *Steam surpasses 65 million users* <https://www.engadget.com/2013/10/30/steam-surpasses-65-million-users/> (last visit September 12, 2016).

⁴⁵ J. CONDITT, *Steam has 75 million active users, Valve announces at Dev Days* <https://www.engadget.com/2014/01/15/steam-has-75-million-active-users-valve-announces-at-dev-days/> (last visit September 12, 2016).

⁴⁶ S. SAED, *Steam has over 125 million active users, 8.9M concurrent peak* <https://www.vg247.com/2015/02/24/steam-has-over-125-million-active-users-8-9m-concurrent-peak/> (last visit, March 3, 2017). See also: *Steam – már 125 millióan használják* <http://www.gamestar.hu/hir/steam-125-millio-regisztralt-fiok-rekord-159274.html> (last visit September 13, 2016).

⁴⁷ DIXON, 2015.

⁴⁸ N. MARAGOS, *EA Launces PC Digital Delivery Service* http://www.gamasutra.com/php-bin/news_index.php?story=7163 (last visit September 13, 2016).

Battlefield, Star Wars Battlefront, Sims, Sim City, Need for Speed) kínál.⁴⁹ Furthermore in the repertoire there are games from Ubisoft and other developers.⁵⁰

Ubisoft also launched its digital service with an electronic pay-system, the UPlay. In the online webstore mainly Ubisoft-developed softwares are being offered – Assassin's Creed, Watch Dog, Rainbow Six, Tom Clancy's Ghost Recon – but there are some other softwares from different developers.⁵¹

Concluding remarks

Spreading digital trade of computer games is one of the most significant phenomenon of the software industry. Softwares might become materialized goods if they copied on a data carrier, but mainly they are intangible, digital goods. The most natural way of distribution for such digital products is the internet. This phenomenon will reshape the purchase habits and the whole chain of distribution. Retailers will be excluded, which is advantageous for the copyright holders (developers and publishers). It also seems that end-users appreciate the cheaper prices and the faster, easier shopping. On the other hand retailers try to put pressure on publishers in order to determine the price of the digital products on the same level as the boxed versions.⁵²

On the other hand excluding the physical data carriers the distribution of used softwares would increase, but with good quality digitally distributed products could tempt end-users to abandon the illegal file-sharing sites for the sake of better quality and permanently provided contents, patches.

Only with the digital distribution the problems of copyright in the digital age can not be solved, but together with other solution the result are significant. For example in England, the Pirate Bay had been blocked by several internet service providers simultaneously for a longer period of time.⁵³ Until the end of the sanction denying acces to the Pirate Bay was successful. Users started to use legal sources, such as Netflix. Without that digital content provider, the users probably would have found another file-sharing site.

⁴⁹ A. KATKIN, *Electronic Arts launches Origin* <http://www.ea.com/news/electronic-arts-launches-origin> (last visit September 12, 2016).

⁵⁰ Offer available at: <https://www.origin.com/irl/en-us/store/browse?fq=platform:pc-download> (last visit September 13, 2016).

⁵¹ K. COX, *Ubisoft Launces Their Own PC Gaming Client, and Is Selling Some Games For 1\$ to Get You To Try It* <http://kotaku.com/5935427/ubisoft-launches-their-own-pc-gaming-client-and-is-selling-some-games-for-1-to-get-you-to-try-it> (last visit September 13, 2016).

⁵² E. KAIN, *Why Digital Distribution Is The Future And GameStop is Not: Taking The Long View On Used Games* <http://www.forbes.com/sites/erikkain/2013/05/30/why-digital-distribution-is-the-future-and-gamestop-is-not-taking-the-long-view-on-used-games> (last visit September 13, 2016).

⁵³ B. Danaher – M. D. Smith – R. Telang, *The Effect of Piracy Website Blocking on Consumer Behavior*, 2014, Workpaper on Information System and Economics (https://mis.eller.arizona.edu/sites/mis/files/documents/speakers-series/2015/mis_speakers_series_michael_smith.pdf) (Last visit March 3, 2017) 2.