Author’s rights in the digital age: how Internet and peer-to-peer file sharing technology shape the perception of copyrights and copywrongs

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Abstract

Author's rights and copyright law have gone through quite a few changes in the 'post-print' culture of binary systems, digital formations and techno-practices. Technological development supports a new concept of author's rights by promoting a free internet and digital market, as well as new contemporary experience of culture that is rooted in digital technology, mass communication and the world of multimedia and virtuality. Though computer and digital technology have served both authors and users in various ways, they have also served as a very fertile ground for sharing copyrighted content, thus leading to numerous copyright infringements and conflicts with the copyright law. The aim of this paper is to identify and analyze the ways in which computer and digital technology have given rise to new trends in the production (e.g. remix culture) and consumption (e.g. peer-to-peer file sharing technology) of culture, but also to determine how new forms of distribution, use and sharing of digital content changed and shaped the perception of authorship in the 21st century. In order to analyze the dynamic, nature and structure by which new digital and networking technologies are affecting the concept of authorship and author's rights and to test the consistency of previously established hypotheses, we conducted a survey amongst the general public. 535 questionnaires were completed. Data was analyzed using SPSS tool and a quantitative method of analysis. In the analysis special attention was given to both, the concept of authorship in the digital environment and the concept of peer-to-peer file sharing technology as not so new, but still very popular networked architecture for distributing, using and sharing digital content.

Results have shown that most of the respondents use peer-to-peer file sharing technology to access, consume and/or share different cultural content (e.g. movies, music, books, etc.) while violating the rights of copyright holders. That is one of the main reasons why copyright holders and creative industry constantly finds new ways to fight peer-to-peer networking technology, especially commercial file sharing, thus sometimes restraining cultural production and even technological development. This leads to the conclusion that this new dynamic, decentralized and distributed networked environment grounded in digital democracy and participating culture of prosumers asks for new legal initiatives and solutions. The research shows that the basic understanding of authorship and the rights of authors and other creative workers in the context of Internet culture and digital media has not changed a lot, but due to new available digital means of production and tools of consumption, users' attitudes, habits and practices towards them have. To resolve this conflict, the law needs to find new mechanisms to establish the balance between the needs and rights of both authors and users.

Keywords: copyright law, author's rights, digital culture, peer-to-peer file sharing, networking technologies

1. Introduction

"*I've come up with the set of rules that describe our reactions to technologies:*

1. Anything that is in the world when you're born is normal and ordinary and is just a natural part of the way the world works.

2. Anything that's invented between when you're fifteen and thirty-five is new and exciting

and revolutionary and you can probably get a career in it.

3. Anything invented after you're thirty-five is against the natural order of things."

(Douglas Adams, *The Salmon of Doubt*)

As many books and articles on the subject of copyright in the digital age suggest, we live in the era of cultural revolution, but also in the era of copyright wars. All thanks to new digital media and Internet technologies. What is even more interesting is that these copyright wars are not fought so much because of cultural and creative issues but because of economic interests.

New digital technologies and media started the digital revolution that transformed the very nature of the public sphere and inspired cultural transformation and new unimaginable ways of communication, interaction and digitally mediated experience. This transformation created new participatory culture that allows its

audience to access it and consume it in many different ways while, sometimes, becoming involved in the creation and dissemination of that same culture. The shift in cultural production and dissemination initiated the rise of creativity and innovation, but it also caused the rise of intellectual property and the emergence of new laws with the idea of protecting the author and all that have supported him and/or invested in his work.

While cultural industries have adapted the Internet and new technologies and media[1], which transformed the socio-economic context of creating, distributing, consuming and sharing cultural goods and services, many of the copyright owners' reactions to the Internet are based on its role in breaking the vertical monopolization business model that supports the copyright industries (Patry 2009).

We need to be aware that information and communication technology (ICT) and Internet technologies are enabling technologies of the digital age. Though most of them are disruptive technologies, they make creativity and innovation occur, and culture flourish while sustaining most of the world's economy. They are responsible for the creative destruction that revolutionizes the economic system within itself while creating new economies that are more productive and profitable. The irony could therefore be that the vitality of industry and the future of capitalism that try to restrain technology, depend on allowing that same technology to flourish and expand.

One of the issues of the Internet and Web technologies is that with their open, decentralized nature and neutral architecture, Internet and World Wide Web become social constructs, i.e. participatory technologies designed for people. It is later that businesses and industries have recognized their potential for innovation and economic growth. Even today, big creative conglomerates are being established, especially when it comes to entertainment industry, and they are using the law as their main weapon to protect their investments and enhance their economic performance. Copyright law is very important when it comes to protecting creative works and expressions of digital culture, but its implementation should be governed by the idea of protecting the author and his rights and securing necessary freedoms for users, and not by the idea of controlling the wires, the code, and the creative process.

> To be able to effectively allocate rights and responsibilities, we need realistic premises and solid empirical data. The three popular justifications for copyright noted above are difficult to pull off individually, and even harder in combination: granting rights to one group of authors places

1 One of the most known projects in the "culture meets technology" domain is The Creators Project. As "a global celebration of creativity, arts and technology", this network of creators and authors of all kind fuses culture and creativity with different media and technology thus creating a wide spectrum of cultural 'products' in the field of art, music, video, gaming, design, etc. URL: http://thecreatorsproject.vice.com/en_us (17-07-2015)

> them at odds with later authors who want to build on their predecessors' works to create new works; granting exclusive rights to copyright owners gives them the ability to protect their investment, but it also gives them the ability to charge monopoly prices and restrict access; granting authors the right to prevent uses for non-economic reasons protects reputational interests but also gives them the ability to suppress satirical works or uses that are socially beneficial but of which the author does not approve. One person's rights are the next person's barrier to creation and competition. You cannot have effective laws unless these inherent problems are effectively dealt with. (Patry 2012, 76).

In his 2014 interview for the Slate, author William Gibson repeated his famous thoughts on technology and future that is already here (just not evenly distributed[2]). Moreover, to properly prepare for this 'present future', the society needs to prepare for the full impact of its immediacy. One of the ways to do so, especially in the context of digital culture and digital economy, is to establish firmly grounded and thorough legal framework. Nevertheless, Lites thinks that attempts to legislate technology, particularly technology that keeps coming, may not be a task as simple as we first thought.

> We can attempt to legislate technology after the fact, but it keeps on coming. Its nature is to be completely out of control. Nobody legislates technology into being. They don't legislate the birth of the Internet or cellphones or anything. They're called forth into the market, and the people who call them forth often have absolutely no idea how these things they've thought of will most change society. It's impossible to tell until people have the things, and they're using them. (Lites 2014).

Though many of us like to speculate about the very recent, or even distant future and the way it involves our everyday lives, one thing is certain. The solution to today's problems with copyright and advanced technology is not to restrain the range of technologies available to the public by dictating users' actions, but to help the public find and use the most relevant tools and resources in the creative and legal way. Thus, the true approach to the problem of copyright meeting the digital culture would be collaboration, not control. For only collaboration can advance the idea of free expression, creativity and innovation of both authors and end-users as significant shapers of our present and future digital culture.

2 By "not evenly distributed" Gibson means that one's access to advanced technology depends on one's wealth and location.

2. General overview

"*The art challenges the technology,*

and the technology inspires the art"

(John Lasseter, American animator,
producer and director at Pixar and Walt Disney Animation Studios)

And so it begins![3]

Maybe the words that marked the beginning of the Battle of Helm's Deep might sound too harsh, but the issues surrounding copyright law, copyright-copyleft and authors-users dichotomy, as well as issues that surround the culture of creativity and creative economy, in most cases impose the scenario of the great war and big-time battle of the two armies. Though there is no real war, changes, technological as well as ideological, define the way we shape our beliefs, attitudes and behaviour towards copyrights and copywrongs[4] of our time, and they are often opposed to one another.

Most of the mass media we grew up with opened the way to new digital media and new cultural forms that inflict the changes mentioned before, and we can fairly say that digital technology today prevails in our everyday lives, influencing and changing our society, economy, culture and politics.

> If we were capable of understanding the changes around us, then they would not truly be changes, but merely developments of the present situation. (Gere 2008, 10).

The inability to fully comprehend these changes poses many questions before us. For instance, Henry and Stiglitz (2010) state that a society which participates in the knowledge economy, must first ask itself a question whether it wants its intellectual property rights, with their increasingly global reach, to further support and endorse the production and dissemination of knowledge or hinder it, which would ultimately effect different global issues, like economy, environment, education, etc.

3 Words said by King Théoden just before the Battle of Helm's Deep (Tolkien, J. R. R. Lord Of The Rings).

4 The term "copywrong" indicates unethical use of copyright system or copyright infringement, especially in the context of Internet, digital media and international commerce. It is an antonym for copyright which implies doing things the wrong way (breaking the law) instead of doing them the right way (complying with the law). One of the first uses of the term is in Siva Vaidhyanathan book "Copyrights and Copywrongs: The Rise of Intellectual Property and How it Threatens Creativity" from 2001 where the term is also used to expose the gaps that exist between the law on the one side and postmodern sensibilities, new technologies and new forms of cultural production on the other side.

Intellectual property and copyright law are essential for promoting innovation, dissemination of knowledge and new economics of creativity, which is why issues like restrictions, monopolization and control should be considered and put in the relation to transformation between creative life and commercial life. This isn't an easy task but it is a necessary one if we were to solve the crisis of our current copyright system and ensure the continuity of culture, knowledge and innovation.

Digital culture (and digital economy)

Based on the importance and value of information and digital technology that enables handling and manipulation of information, digital culture protects the values of collaboration, empowerment, freedom of expression and freedom of thought, which makes it harder to incorporate and justify the principle of intellectual property.

> Private intellectual property restricts methods of acquiring ideas (as do trade secrets), it restricts the use of ideas (as do patents), and it restricts the expression of ideas (as do copyrights) – restrictions undesirable for a number of reasons. (Hettinger 1989, 35).

Yet, in a society where arts and business conjoin and where culture is largely distributed and delivered through market, installing robust and righteous copyright system may become one of the central components that build and support culture in the digital age. In that context, justifying intellectual property and copyright law becomes very important, too, because protecting the author and his work and encouraging and ensuring profit for one's intellectual labor is of great importance if we were to talk about the culture of creativity and innovation. Intellectual property and copyright law mustn't be seen as mere restrictions to our free and open information and knowledge society, but as mechanism that were to secure the rights of the creators and authors while ensuring the free flow of ideas and knowledge. This is why it is important not to let lobbyists for copyright-affected industries make all the decisions.

Digital culture, and moreover digital economy have actualized the question of ownership within political economy where three key elements help shape cultural production: 1) public element, 2) market-driven element and 3) gift economy, which some see as true expression of future anarcho-communism that will in time overcome capitalism (Terranova 2004). Even though it would be hard to imagine digital culture, digital economy, Internet commerce and the creation of global market without digital technology and new media, they (technology and media) have also facilitated copyright infringement, illegal copying and distribution of copyrighted content thus leading to, what some (Atkinson 2014) would call, "digital lawlessness".

Copyright holders deserve to have their moral[5] and economic rights protected for they invest their ideas, work, time and money and they have right to be paid for what they do, especially if that is their main source of income. The integrity of their creations should be recognized and protected as much as the economic value of their work or end-product.

Digital technology, new media and the law

Challenges posed by digital technology and new media question copyright's balance and justify a need for new legal framework and new technical solutions. As open and interactive medium, Internet embraces cooperation and participation as its own *modi operandi* thus becoming a true example of public sphere. Not being too excited about the powers of the digital age, we must agree with Moyo (2008) who claims that this, somehow, utopian depiction of the Internet as autonomous, participatory, interactive, non-discriminative and open platform has its bugs, being it censorship, issues of access and cost and lately, as Vaidhyanathan (2001) says, the collapse of distinctions between different types of intellectual property and between three formerly distinct processes of 1) accessing the creative work, 2) using the work and 3) copying the work. When established, copyright system was designed to regulate only copying, but not one's rights to use or share the work. But since the difference between accessing, using and copying the content is fading away due to unprecedented simplicity of modern-day technology, law-makers need to choose if they want to relinquish some control over copying or if they want to expand the control over the issues of access and use, which, as many warn, might restrict or even diminish democracy and community's creativity.

> Of course, it isn't just technology that stirs up old copyright questions: The logistical compromises of the past can be unraveled by an innovative business model, a new alliance between producers and manufacturers, or a shift in the way culture is consumed. The current debates about copyright have as much to do with the cultural dominance of media content, the increasing concentration of the industries that produce it, and

5 The approach to moral rights is quite different in two traditions – Continental (droits d'auteur, Urheberrecht) and Anglo-Saxon. While continental tradition emphasizes the value of author's moral rights as well as his property rights, Anglo-Saxon tradition sees no difference between droits d'auteur and neighbouring rights, i.e. it lacks true protection of moral rights. The two systems have other differences as well, such as their view on exceptions and limitations on copyrights especially when it comes to user rights and the concept of fair use, their view on distinct content of the copyright royalty and the legal nature of those royalties, the comprehension of formal ways of expression and process of registration, their comprehension of the concept of originality as minimum creativity or talent required for the work to be considered original and the difference in applicability of protection periods.

> the political climate of market deregulation as they do with the computer and the Internet. (Gillespie 2007, 31).

When USA Congress voted for the Digital Millenium Copyright Act (DMCA) and Copyright Term Extension Act (CTEA) in the 1998, it didn't only judge civil and criminal violations of the copyright law, but it used the technology itself to do so – different technological measures (watermarking and digital rights management applications) were being used to control access to and distribution of copyrighted content. The problem emerged because:

> with the access provisions of the DMCA, the entire history of copyright was thrown out of the window. Now it is technology that is regulated – technology developed by third parties, and legitimate technologies at that. The DMCA is the twenty-first century equivalent of letting copyright owners put a chastity belt on someone else's wife. (Patry 2009, 162).

Thus, industries took the advantage of favourable laws and started using code to restrict copyright infringement – they were fighting technology with its own weapon. That moment instigated four surrenders of important safeguards in the copyright system (Vaidhyanathan 2001, 150-160): 1) the surrender of balance to control, 2) the surrender of public interest to private interest, 3) the surrender of republican deliberation within the nation-state to multilateral nongovernmental bodies (like WIPO and WTO), and 4) the surrender of culture to technology, which is mostly accentuated in the injunctions and limitations of the DMCA. Instead of regulating the activities of users, DMCA became a holy grail for content industries. As Gillespie (2007) describes, DMCA formed the fourth side of regulation (technical artefact, commercial agreement, cultural justification and legal authority) which enabled industries to control users in a way that copyright law was not able to control them. In some respect, users are presumed pirates until proven good consumers.

As a shift towards technical protection, DMCA and other copyright directives for the digital age have a profound impact on culture and society as a whole. They change the rules and shift ideologies, social paradigms and concepts.

Concepts of authorship, ownership and usership in the digital age

Besides creating a disruption in the creative economy and having a far-reaching impact on entertainment and publishing industry, new digital technology led to significant changes regarding the concept of authorship. Authors like Goldsmith (2011) see technology as a tool that sparked the transformation, even evolution of the concept of authorship giving it new cultural value and transforming authors themselves into "thieves" and "combiners" of present cultural artefacts. In a world that is already full of objects and blessed with information technology, new conditions emerge and artists need not create more, but negotiate the vast quantity of objects and works of art that already exist. Goldsmith states that over the years many writers employed copying and appropriation as new strategies of constructing the literature.

Therefore, it is fair to say that the rise of digital culture became essential for the rise of differences between the analogue and the digital author. Thus, it is only reasonable that the concept of authorship, as well as authorial practices changed in the new digital setting. This, of course, does not mean that everyone who publishes his or her work online gets to be called a writer or an author, but digital technology and electronic publishing have certainly changed the way we perceive authors and their way of making a living through storytelling.

Velagić and Hasenay (2013) distinguished four major issues referring to the digital author and his work: 1) the issue of creation and publishing (technology and different self-publishing platforms enable authors to become publishers), 2) the issue of manufacturing and distribution (technology changes and influences production and distribution processes), 3) the issue of perception and reception (technology and different media have influenced the concept of authenticity and creative individuality by supporting the rise of different authorial roles) and 4) the issue of survival and presentation (it is not possible to preserve everything that is being written and published so the question of selection criteria becomes very important). These four issues define the aspects of modern understanding of authorship and the role of author in the ever-changing digital environment.

For instance, when we talk about the issue of distribution, authors and creators of cultural content have come very close to their public.

> The time has come for us to be aware that, in our post-post-industrial age, the long route—which used to lead the work from its creator to the public by passing through different categories of businesses—is gradually being replaced by a short route, which puts creators and the public in direct contact… Creators can increasingly access markets without engaging in the trilateral relationship that used to be characteristic of dealings in copyright. Indeed, these technological determinants enable creators to make works directly available to the public. (Ricolfi 2012, 50, 52).

Not only have digital technology and media shorten the route, they have also enabled public to become producers (or prosumers as Medak (2008) calls them) and distributors of cultural work – the distinction between producers and consumers of culture has slowly been erased. As individuals become content creators, the boundary between authors and their readers gradually becomes blur. Easier (re)distribution of copyrighted content changed the balance of distribution power, but as Gillespie (2007) states many more changes occurred – on the one hand the privileged place of artists and their patrons is being challenged as well as the assumption that cultural and artistic expressions move in one direction, and on the other hand cultural and artistic expressions are constantly being commercialized, commodified and managed based on corporate interests. This, of course, puts a question on the idea ownership in the digital age. The idea of ownership or private property has changed through time. From Plato and his arguments in favor of collective ownership; through middle ages and St Thomas Aquinas' dialectics of one's virtue expressed in the

use of one's property or early modern period where for some property was instituted through conventions and political decisions and for others in a state of nature; all the way to the beginning of the 20th century where the idea of property already encouraged the idea of copyright or the present time where ownership isn't so much a philosophical issue, or even an issue of moral, but economic rights and privileges. These economic rights and privileges, presumed by the idea of ownership, become particularly interesting in the context of Web based businesses built on using content created by other people.

The question of user's rights, or usership, has also been an issue in the context of digital culture and digital technologies and it is opinion of many today that it should be publicly discusses. Digital culture allows users greater individuality, autonomy and ability to access and use copyrighted content, while digital technology engages them more directly in the process of creation by installing them as ultimate reviewers. However, public discussions and increased politicization are not necessary the things that will secure stronger users' rights; though they emphasize the need to protect users' rights some other means might be needed to implement them. Yet, Haggart believes that public engagement will increase the political cost of concluding a copyright treaty or legal reform that ignores user rights (Haggart 2014, 251).

Therefore, while users' rights have not been completely secured or guaranteed, it is of great importance to debate over it and pressure lawmakers to install them as equal element of copyright policies.

Peer-to-peer file sharing technology and distribution of digital content

In the beginning, there was peer-to-peer. At least, that was how Tim Berners-Lee envisioned the World Wide Web – more flexible and distributed architecture, free from control and supporting innovation, architecture that symbolizes cultural politics of decentralization. Gradually, as hierarchical structures of servers and clients became dominant, Web became more centralized (Lessig 2001). But it didn't make peer-to-peer technology go away. This decentralized, collaborative and nonproprietary modality of organized production (Benkler 2006) still exists in our digital landscape as a very popular distribution service. Though it is being abused in different ways (copyright infringement, installing spyware, illegal access to information, unauthorized content replication, etc.), it also has many legitimate uses. For instance, Cassadeus-Masanell and Hervas-Drane (2010) suggest that content industry should embrace digital distribution and reassess their revenue models if they want to compete against peer-to-peer abuses and become accessible and attractive to the consumer in the networked environment.

Using very simple protocol and almost no support by the transport network, this and similar distributed services provide simple and efficient mechanisms, as operable on a large scale. Based on equal autonomous peers who share storage,

processing power and content, peer-to-peer represents highly attractive and efficient environment for distributed computing (Tutschku, de Meer, Andersen, Kawashima 2004). Most of the protocols used are open decentralized search protocols used for file sharing, and mostly for illegal file sharing – upload and download of copyrighted content. Though this illegal use is responsible for peer-to-peer's bad reputation, there are legitimate applications of peer-to-peer's networks, most of them embedded in two main characteristics of peer-to-peer systems (Steinmetz and Wehrle 2005, 10): decentralized resource usage and decentralized self-organization. Both principles indicate the paradigm shift-taking place in the digital environment – replacing coordination with cooperation, centralization with decentralization and control with incentives. Architecture and technical advantages of peer-to-peer networks represent an alternative to traditional client-server architecture and great platform for collaborative content hosting, file sharing, data storage management, etc. (Verma 2004). The true potential of peer-to-peer networks goes beyond movies or music swapping between peers and pirating online content[6], which is one of the main reason why this technology should not be banned, constrained or restricted in any other way.

Regarding regulation of peer-to-peer activities on the Internet, the law has pointed Internet service providers (ISPs) to act on behalf of copyright holders while asking them to accept the idea of secondary liability for the illegal activities of their subscribers (Atkinson 2014). This debate is still on, for ISPs refuse to accept the obligation to monitor and prohibit their subscribers' activities.

The world of social media

Gradually many began to see peer-to-peer technology as a great opportunity for communication and exchange of information. Then came social media and social networking sites that enabled video-sharing, music-sharing, photo-sharing. Yet again in the history of entertainment industry, alarmed copyright holders and property owners felt that they are about to lose control. Especially because of the way that social media revolutionized and democratized communication and flow of information. As Campbell, Martin and Fabos (2014) state, social media represent, amongst other things, a platform that engages users in creating content as means of communication. This, often collaborative, creation of content in the networked environment became an issue for the law-makers.

And just as in case of peer-to-peer technology, they have missed to see all the opportunities and possibilities that social media offers when it comes to creating new markets and shaping the needs of users. Instead, fear of reduction of proprietary rights became the main motive for the law and courts, which

6 Lessig (2001, 136-137) states that "peer-to-peer technologies could be more efficient caching technologies". In the context of streaming technology that would imply greater speed and reliability because caching systems can be more efficient in delivering content.

almost always side with the forces of restriction and enclosure. Despite copyright advocates' arguments, digital networked environment, especially social media and social networking sites, is rooted in the idea of social relations, cooperation, sharing and participation. To find its way in the world of so many social impulses and pronounced sharing ethic, copyright law's first task is to reduce impersonal nexus between production and consumption and admit the importance and role of consumers of copyrighted material (Atkinson 2014).

Social media and digital environment have played a major role in creating new forms of culture and multimedia and thus a major role in creating a pressure to expand copyright law to these forms (Aplin 2005).

Remix, Mashup and new sharing culture

In the information-based economy where ideas have value, combinatorial creativity (Kleon 2012), networked knowledge and the culture of remix echo the premise that nothing is fully original, that every artist build his work on the work that came before his, and that every new artistic and creative idea is nothing but a remix or a mashup of previous ideas.

Remix culture has emerged thanks to a variety of affordable digital tools and media which make it possible for the creative individuals to take different cultural fragments and recombine them in a new inventive way. Decherney (2011) states that remix culture rose as an active, collaborative and participatory form of creating content, the form which was for some time suppressed during the era of mass media popularity. Now, thanks to new digital technology and (social) media, examples of mashups, collages and remixed works can be seen throughout the digital landscape.

These new forms of (digital) culture popularized new types of creative expression and artistry, though copying, reusing and imitating one's work can, and often is, seen as legally ambiguous. For new cultural forms such as remix and mashup to occur and flourish, society needs rich cultural soil, something that Lessig (2008, 28) refers to as "Read-Write" or RW culture[7]. This kind of culture can support and endorse nonprofessional creativity and artistry that is as significant as professional creativity. One of the most common essential acts of RW creativity is remix – a collage of different cultural elements that combined create new form and meaning.

The legal framework that supports and encourages these new forms of digital creation and expression can be found in the Creative Commons licenses. Back in 2002, in San Francisco, Lawrence Lessig, Hal Abelson and Eric Eldred created new license and they have called it Creative Commons licenses. It was inspired by the open-source and free software movements[8] and it was supposed to

7 "Reading" in this context means the ability to create an re-create the culture around us.

8 Richard Stallman's free software movement values four distinctive freedoms: the freedom

serve as a fine-tuned copyright structure with "some rights reserved" for the author. What it actually does is allowing the authors and creators to share their work with the world under different terms, while ensuring certain rights for themselves. They can allow others to copy their work, but not to make derivative works, or they may allow others to you use their work as they wish, as long as they do it non-commercially, or even give others complete freedom provided that they attribute them as the owner and creator of the work (Boyle 2008). Today, many see Creative Commons licenses as tools for resolving the conflict between authors and industry on the one side and public and users on the other side. And as digital age brought many conflicts surrounding copyright law, establishing balance between copyright holder's concern to protect their rights and users who feel their freedoms have been threatened has become an important issue. But to really act as a solution, Kim (2008, 189) thinks that Creative Commons licenses must satisfy three conditions: 1) they must accurately reflect the production process of creative works, 2) they must serve the private interests of creators and authors, and 3) they must serve the public interests of users. Though they did not solve all the problems surrounding the copyright law, Creative Commons licenses facilitated the legal dissemination of creative works thus creating 'commons' of information. They have also raised awareness how important it is to relate the issues of copyright, creativity and freedom and try to fix copyright. And last, they have changed the belief that in copyright wars we must choose between all or nothing – between complete freedom (and chaos) and complete control (and order).

All these changes – new forms of cultural expression and new ways to protect them, their authors and their users – flourish in the context of sharing philosophy, the phenomenon Guadamuz (2002) calls the "new sharing ethic". While opposing traditional concepts of copyright and intellectual property, these sharing practices stand in defence of Internet's ground premise – the free flow of information – and are founded in the concept of hacker ethics.

> It is important to stress that the sharing that will be discussed is the free sharing of works by their authors or inventors, as opposed to the common sharing of other people's works that is prevalent in many sectors of the Internet-in particular music, software, literary works and images-which falls under the category of copyright infringement, plagiarism and piracy. (Guadamuz 2002, 129).

As Guadamuz emphasizes, sharing in the digital arena must be grounded in the notion of balance between social and economic interests of both sides and not in the author's rights – user's rights dichotomy or idea-expression dichotomy. Lately, thanks to peer-to-peer technology and social media, sharing has become

to run a program for any purpose, the freedom to examine and adapt the program, the freedom to distribute copies and the freedom to improve the program and further distribute the copies of the improved version. These "free as in free speech" type of freedoms were called copyleft and they are based on the principles of openness and sharing.

new cultural phenomenon that finds its place in the networked co-operative culture of the Internet and in the sector of gift economy. However, not all sharing is good.

Postmodern piracy

As one of the most know technologies for violating copyright law, peer-to-peer file sharing technology, was made famous by Napster and similar online services that encouraged piracy and copyright infringement. Through time, piracy has become the main argument in the rhetoric of digital economy and its politics, as well as the ever-present aspect of devising and framing national and international laws (Johns 2009, 497).

Piracy was created as a result of improved information-handling technologies and as a result of the increasing importance of information (Hettinger 1989.). Though sharing information through a network of computers is old as the first bulletin board system (BBS), it was revolutionized through file-sharing systems and peer-to-peer networks. Both BBSs and peer-to-peer file-sharing systems were intended for good purposes, but that doesn't deny the fact that vast majority of file sharing comes in the form of online piracy, especially in the areas of music, movies and software (Gordon 2014).

> The key to the "piracy" that law aims to quash is a use that "rob(s) the author of (his) profit." This means we must determine whether and how much p2p[9] sharing harms before we know how strongly the law should seek to either prevent it or find an alternative to assure the author of his profit. (Lessig 2004, 66-67).

Though entertainment industry statistics and claims of authors like Levine (2011) single out piracy, and its idea that paying for the content is optional, as main reason for the media industry's race to the bottom (staff cuts, quality cuts, etc.), we can't portrait every pirate as a thief and a bad person. In other words, even entertainment industry's claims that piracy, especially the piracy of music and movies, has inflicted great economic damage to the global trade of cultural commodities and goods cannot be taken without a shadow of a doubt. In his book "*Free culture: how big media uses technology and the law to lock down culture and control creativity*" Lessig (2004) defines four types of piracy regarding the kind of harm file sharing inflicts upon author. The fourth type (accessing and using the content that is not copyrighted or that is given away by the copyright holder himself) is, from the legal point of view, considered as clearly legal. Actually, only the first type (accessing and sharing the content as a substitute for purchasing it) can be called true piracy since it produces economic harm while violating the copyright law. Other two types (accessing and sharing the content before buying it and accessing and using the content that is no

9 P2P is an acronym for "peer-to-peer".

longer sold or one wouldn't buy it anyway because of high transaction costs) are technically violations of copyright but they, too, produce no economic harm. In a culture where avoiding paying for products and/or services (because it is easy, because everybody else does it, because there is no or little chance to be caught, etc.), the issue of relationship between the pervasiveness of copyright infringement and public regard of authors rights and welfare becomes stressed more and more. And though it may seem as if public simply doesn't care about paying its dues, Bell (2014) concludes that public tends to perceive the obligation to pay the author for his work similar to the obligation to pay taxes, because users perceive it as a question of civic virtue and not a matter of good vs. bad behaviour. Most people respect the author and his labors and are willing to pay for his work but they encounter different limits when it comes to paying.

As the public became too big, entertainment industry slowly realized that it already possesses the key to solve the problem of piracy, i.e. influence and change the beliefs and actions of modern-day pirates. Anti-piracy wars, who left large collateral damage by criminalizing creative personas of the digital age (Lessig 2008), are gradually being replaced by actions of converting pirates into customers who pay. Instead of constantly trying to fight piracy, industry and companies are investing in ways and means to compete piracy by selling competitive products.

Contrary to common belief, pirates are not always bad people who like to steal things or poor people who cannot afford to buy things. Johns (2009) emphasizes that this sudden rise of cyber-criminals coincided with the greater influence of proprietorial approaches and attitudes toward networked digital economy, Of course, money (low income, high prices) can be one reason for piracy, but there are other reasons that drive people to piracy, stronger than economic gain. It can be culture or different opinions, beliefs and attitudes.

> If there is one thing our research for Pirates of the Digital Millennium has taught us, it is that human motivations are not so simple. There is a mix of reasons people and companies—and countries—do or do not pirate music, movies, games, and software. They include culture, attitudes toward big business, laziness, convenience, sense of fair play, and that ever-elusive sense of right and wrong. (Gantz and Rochester 2004, 229).

> Besides culture, Internet itself poses new moral ground rules since its structure and nature encourage dissociation by demanding no accountability or any notion of authority. Still, some conscience and moral derive from its social interaction and context, but not enough to stop the bending of morality. This is why Gantz and Rochester (2004) think that theft of intellectual property in cyberspace can become a very impulsive act in the digital era. The very nature of the Internet distorts people's understanding of intellectual property.

Is copyright truly broken and what say EU?

Instead of claiming that copyright is broken, it would be better to say that the times have come when the potential use and abuse of creative works and intellectual property has become unprecedented (Zekos 2005) and when crisis hit the state of evolution of intellectual property (Endeshaw 2004, 363). There was a time when copyright law was quite successful as a regulatory mechanism, but in the context of cyberspace, digital information, multimedia and information technology, i.e. in the context of constant introduction of new technology continual reform of the copyright law is required. The move from physical to virtual has made copyright a subject of mass politics and for the first time individuals have become directly involved in this complex political story (Haggart 2014).

The only fact that gives evidence that copyright might truly be broken is the fact that law today protects the rights of industries more than the rights of authors. Though many often refer to it as one of the main problems in the copyright system today, this issue is not new. From the middle of the 20th century, copyright law and the assumptions of law-makers were coloured by the demands of copyright industries, and slowly the rights of authors and creators became subsidiary to those of the industries on which they depended (Atkinson 2014.).

Another problem, according to Endeshaw (2004) are outdated forms of intellectual property. He claims that many commentators and scholars, him being one of them, have called legislators and public to re-think, and even abandon, the classical forms of intellectual property, like patents, trademarks, designs and copyright, forms that are in discrepancy to current technological and media advances and that are no longer in a position to answer the challenges of expanding information and communication technology. The problem is there is still no consensus on the changes needed and sought, nor is there a true alternative to the previously mentioned classical forms.

Creative industries should be able to offer an alternative to Internet's copywrongs. Patry (2009, 8) suggest that record industries should have been able to provide an alternative to Napster long ago in order to avoid their crash and destruction at the beginning of peer-to-peer era. Though there is no one solution, Gordon (2014) suggest that using modern technology and legal frameworks might help industries fight for their rights. The Internet has created many opportunities, even for copyright industries, which enables them to fight piracy more efficiently. First, the industry can use technology to meet customer's needs and desires by making their products available for sale online. Second, the industry can use technology to protect their copyrights (copy-protection technology and DRM) bearing in mind that developing technical solutions to enforce copyright is not as easy as it seems. Third, the industry should help improve copyright laws by working together with policy makers who help them in their fight against infringers.

Besides technology, piracy can be answered with modern and well-designed legal and policy framework. Litman (2006) suggests that we should revise the copyright law and make it more suitable for the information age. One way to do that is to define shorter, more simple and fair copyright law that everyone could decipher, to recast copyright as an exclusive right of commercial exploitation, and to find alternative ways of enabling authors to control access and distribution of their works in the digital form. It has been obvious for some time now that copyright laws, as well as international conventions and treaties need to be reformed in order to successfully answer the challenges of digital culture and economy. Haggart (2014) thinks that this reform and change of legal framework should be based on the right of smaller countries' ability to exercise copyright-policy autonomy (meaning that domestic social and political context are crucial for establishing effective copyright system) and on ensuring that every voice matters (domestic and national politics matter just as much international agreements, conventions and laws).

When it comes to EU and its legal framework, European Commission has passed the Information Society directive 2001/29/EC with the aim to balance certain aspects of copyright and related rights in the context of technological development and knowledge economy while focusing on reproduction and communication rights. It is, as Mazziotti claims

> the most horizontal" (i.e., comprehensive) measure ever adopted in this field. In spite of its title and apparent objectives, the InfoSoc Directive provides EU law with a horizontal regulation of copyright that goes far beyond the framework of digital settings, and involves all dimensions of artistic and literary property. (Mazziotti 2008, 41).

Still, some of the unsettled issues that Mazziotti (2008) refers to, that need to be addressed and solved if EU wants to move towards a better copyright law, are 1) assessing the true impact of file-sharing on the market for copyrighted works, 2) defining the nature of peer-to-peer downloads as an exception of private copying (since downloads, unlike uploads, don't infringe the exclusive right to make copyrighted works available to the public), 3) resolving the constant clash between freedom of use and DRM technology, and 4) considering copyright policy alternatives that would preserve user's freedom of expression and information better. This calls for a serious revision of the copyright law – creating legal infrastructure of users' rights and keeping only rights management technologies that protect exclusive rights while enforcing copyright exceptions.

Sganga (2015) describes the state of EU copyright law as a state of high level protection, a state of misbalance with the risk of conflict between authors' prerogatives and users' rights and as a state of chaos generated by the discordance between EU copyright law and national legal frameworks and traditions. Some of the solutions for these issues could be found in legal reforms and current flexible legislative framework, as well as in creating model private agreements that would not oppose market tendencies. Thus, Sganga suggests we should turn

from a problematic mine zone to a more stimulating one while deconstructing the copyright propertization. All this should support us in accomplishing more positive results, such as:

1 solving the clash between multilevel legal sources,

2 establishing certain and defined criteria for pursuing the „fair balance" between copyright and fundamental rights,

3 building national courts' active and resistant attitude towards statutory law and involving them in the development of EU copyright law (Sganga 2015, 23-24).

It may seem impossible to change laws and conventions that have been here for hundreds of years and that have shaped our society, culture and economy in many ways, but digital age and its network driven cooperation and culture of sharing and participation have opened a door to change that has, if we were to be honest, been here for the last 20 or more years. This change should still be based on rules, but those rules should form a legislation that supports innovation, creativity and thus more genuine market competitiveness and cooperation.

To create productive and supportive legislative agenda for the digital age Ricolfi (2012, 53-54) suggests that law-making agenda for the digital environment should meet at least three requirements: 1) law should incorporate rules that are appropriate for both, long and short route; 2) law should enable both set of rules to coexist by making them interoperable; and 3) law should ensure the work of short route by removing the obstacles inherited by the past, but in a way that doesn't disrupt the workings of the old, i.e. long route.

All the described issues, suggestions, and opinions on how to solve them may seem a bit complicated and overwhelming at first, but there is no need to panic.

Don't panic![10]

If we can be sure of something, then it is the fact that the notion of copyright and dispute between analogue and digital culture we face today is not a new thing. It goes all the way back to the Statute of Anne (1710). Because the problem is not really (computer or peer-to-peer) technology but the issue of right to make a copy (Baldwin 2015). Thus, three centuries later and we still face tensions, problems and conflicts.

So yes, one may think that things are "insanely complicated" and unsolvable, but maybe we should listen to Douglas Adams' advice. Though it can be really hard to achieve peace and balance or make any predictions in the times when

10 A phrase on the cover of Douglas Adams' novel "The Hitchhiker's Guide to the Galaxy". The purpose of this advice was to keep intergalactic commuters from panicking since the device they used looked "insanely complicated" (Douglas Adams, The Hitchhiker's Guide to the Galaxy, 1979).

so much is changing, the key is to become aware of the change and anticipate it, to observe it, understand it, and act accordingly. Society and law can certainly anticipate that business, market and profit will continue to be as important as the ethics of sharing, non-market relations and free culture; and they should act according to that. We can certainly find the way to combine these two sides of digital culture and creativity and to make them interact with each other while creating healthy and productive digital environment – we have learned from the past, we have the tools, we have the right environment and right sets of skills, so we should act. For Web only knows what lies ahead.

3. Research

3.1. The aim and purpose of research

The aim of this paper is to portrait the dynamic relationship between digital content and copyright system that protects it and the ever-developing Internet technologies for using and sharing that content. The emphasis is being placed on peer-to-peer file sharing technology as the most known and used form to distribute and share content on the Internet. Another aim is to identify the changes in users' perception of authorship and author's rights in the digital age.

The research focuses on two main aspects:

1 The changes in the perception of authorship and copyright in the networked environment.

2 Peer-to-peer file sharing technology as a dominant medium for digital content distribution and sharing.

Research questions:

1 What are users' habits and practices when it comes to using, sharing and distributing online cultural content?

2 What are users' attitudes and habits concerning the use of peer-to-peer files sharing technology?

3 What are users' thoughts and attitudes toward the issues of copyright, piracy, authorship and author's rights in the digital age?

There were two previously established hypotheses:

1 Internet users use modern digital technology to access and share copyrighted content, both legally and illegally[11].

2 Modern digital technology and networked environment change the perception of authorship and author's rights. Users ask for: A) new approach when it comes to protecting the rights of both authors and users, and B) new alternative mechanisms that will protect author's moral and economic rights.

3.2. Methodology

The research method used was survey of Croatian general public with a sample of older teenagers (ages 15 – 18) and adults (ages 18 and over). The survey was conducted using an online questionnaire in Croatian language that was distributed via faculty's web page, social network sites (Facebook, Google+, Twitter), emails and on site. Faculty web page was used to survey all students of Information Sciences department and social networking sites and emails were used to survey other adults (students and other adults – employed, unemployed and retired). Surveying older teenagers was conducted by visiting high-schools in Slatina, Osijek, Donji Miholjac and Virovitica. The aim was to reach the desired population of users of online cultural content, peer-to-peer file sharing technology users and users who use Internet as their main source of cultural content.

Research sample included 552 examinees of whom 535 completed the questionnaire.

The questionnaire consisted of 16 questions (one choice, multiple choice or open-end) related to A) general information about respondents, B) their habits and practices when it comes to using and sharing online cultural content (the type of online content they consume on the Internet, the ways they find and access that content, which of the content they download, use and share (both legally and illegally), what torrent clients and pages do they use, reasons why they download, use and share online content) and C) their attitudes and thoughts on copyright law, piracy, authorship and author's rights.

11 Terms "legal" and "illegal" are taken in the context of Croatian copyright law (Zakon o autorskom pravu i srodnim pravima Republike Hrvatske) and WIPO Treaty. Term "legal" was defined as *downloading, using and sharing the content that author himself provided free access to, content that was protected by one of the open licenses, e.g. Creative Commons license, content where copyright has expired or content that is considered as fair use*. Term "illegal" was defined as *downloading, using and sharing the content that is copyrighted and whose distribution or any other form of use is illegal by the law.*

3.3. Research findings and discussion

General information about respondents

535 completed questionnaires were collected during the period of two months (from October the 1st until November the 9th 2013), 55% (N=294) being completed by female and 45% (N=241) by male respondents.

Most respondents fall in the 18-35 year age range. 36% (N=193) were age 18 or below, 32% (N=171) were in the 19-25 year age range, 20% (N=107) were in the 26-35 year age range, 7% (N=38) were in the 36-45 year age range, 4% (N=21) were in the 46-60 year age range, and 1% (N=5) were over 60 years old. Majority of respondents were high school students (42%, N=225), employed workers (26%, N= 139) and college students (25%, N=134).

Household income level

When it comes to monthly household income, 32% (N=173) or modest majority of respondents live in households with monthly income between 3.000,00 and 6.000,00 KN[12]. 28% (N=148) live in households with monthly income between 6.000,00 and 10.000,00 KN. 15% (N=79) live in households that receive between 1.000,00 and 3.000,00 KN per month, while 14% (N=77) live in households that receive between 10.000.00 and 15.000,00 KN per month. Lastly, there minority of respondents, i.e. 4% (N=21) live in households with monthly income below 1.000,00 KN and 7% (N=38) live in households with monthly income between 15.000,00 and 20.000,00 KN.

Though the level of income can be of major influence on the actions of piracy and illegal download of copyrighted material, it is not always *the one and only* explanation of the piracy statistics in the entertainment industry and other areas of cultural production. Especially if we take into consideration Lessig's (2004) classification and explanation of piracy and Johns (2009) emphasis on cultural reasons.

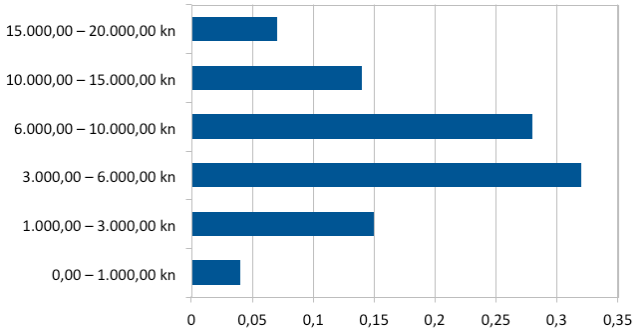

Table 1. Household income level

12 1 KN = 7,6 EUR = 6,6 USD.

Using Internet to obtain digital media and cultural content

When asked whether they use Internet to obtain digital media and cultural content, 96.3% of respondents said "yes" thus confirming that they use Internet to obtain digital media and cultural content like e-books, music, movies, TV shows, video games, different computer programs and applications, etc. This means that only a small minority of 3.7% of Internet users (N=20) do not use Internet to obtain digital media and cultural content. Thus, further analysis will be based on the sample of 515 respondents. Previous sample of 535 respondents cannot be seen as relevant for this research since 20 out of 535 respondents do not use Internet to access, download and/or consume digital media and different cultural content on the Web.

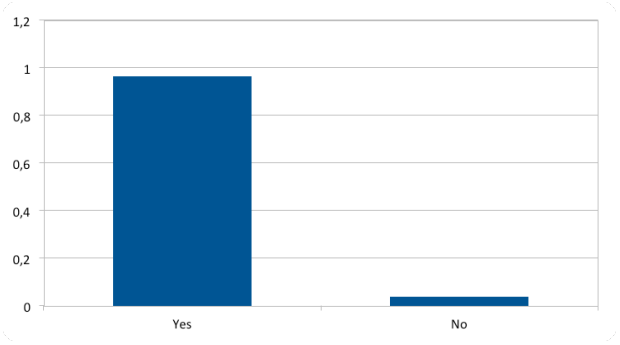

Table 2a. Do respondents obtain digital media and cultural content from the Internet?

When asked how they obtain digital media and cultural content on the Internet, respondents were able to choose more than one response. 22% (N=114) claim that they buy it from the distributor or directly from the author, 67% (N=343) claim that they obtain the media and content legally (i.e. legal access, download, use), and 70% (N=360) claim that they obtain the media and content by downloading it illegally from the Internet (i.e. accessing, downloading and using copyrighted material that is illegally uploaded and distributed on the Internet).

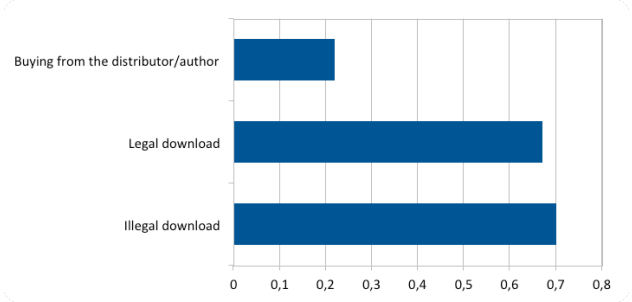

Table 2b. How do respondents obtain digital media and cultural content from the Internet?

Legal access and/or download

Furthermore, respondents were asked what type of media and cultural content do they most often obtain through legal access or download. They were able to choose from eight different answers, but their choice was limited to three most common ones. The majority or 44% of respondents (N=227) obtains educational materials (e-books, articles, presentations, etc.) that aren't copyrighted or that are a part of public domain or that are licensed with one of open licenses. Following are applications, computer programs and tools which are obtained by 42% (n=219) of respondents. 37% (N=195) use legal download to obtain photography, pictures and different graphic works. 32% (N=165) obtain music, and 24% (N=124) obtain video games.

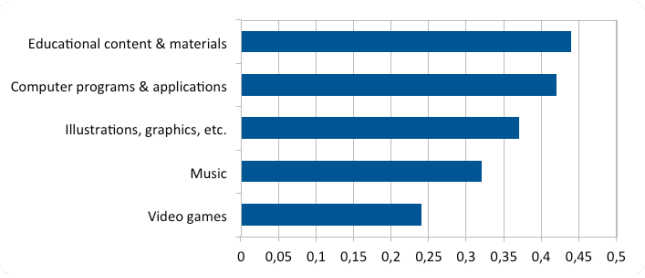

Table 3. Type of digital media and cultural content legally obtained from the Internet

Illegal access and/or download

Respondents were also asked to state what are the digital media and cultural content that they most often access or download illegally. Again, the respondents were able to choose from eight different answers, but their choice was limited to three most common ones. 69% (N=357) download movies, 58% (N=301) download music, and 39% (N=220) download TV shows. This, in a way, confirms the fears of entertainment industry and their reasons to enter the *war against piracy*.

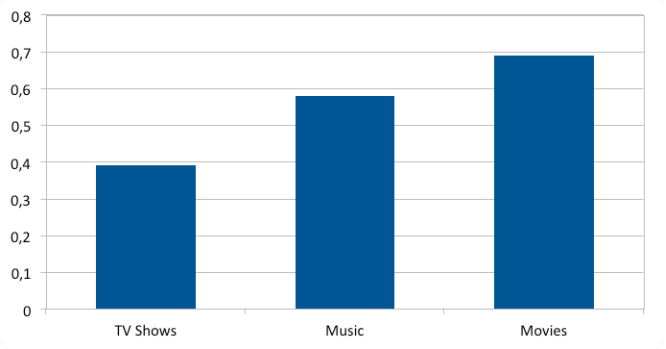

Table 4a. Type of digital media and cultural content illegally obtained from the Internet

When asked how often do they illegally access and/or download media and content from the Internet, 30% (N=152) answered that they do it couple of times a month, 26% (N=133) do it rarely, 22% (N=114) do it couple of times a week, and 16% (N=82) access it and download it every day. Only 6% of the respondents (N=31) answered "never" which means that they are the ones who always use legal means and ways to obtain digital media and cultural content on the Internet.

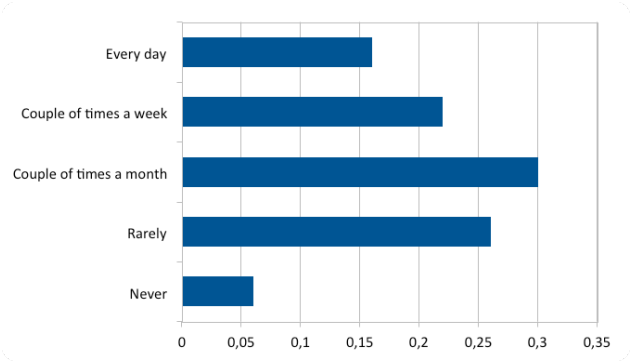

Table 4b. Frequency of illegal access and/or download of digital media and cultural content

Next question was referring to the means or ways through which respondents illegally obtain digital media and content, and they were able to choose three of the six possible ways – torrent pages (torrent sites), streaming services and pages, social media sites, file sharing programs, file storage services, and other. Out of 515 respondents, 78% (N=405) use torrent sites, 34% (N=173) use social media sites, and 30% (N=152) use streaming services and pages.

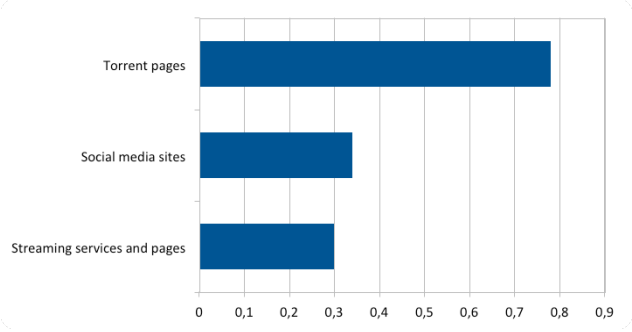

Table 4c. Means/ways of illegal access and/or download of digital media and cultural content

Since it was expected that most of the respondents use torrent sites for illegal download of copyrighted material, we asked them to tell us what are the most common torrent sites that they use. Respondents could choose up to three torrent sites. 58% (N=299) use Piratebay, 39% (N=199) use Torrentz, and 29% (N=148) use isoHunt, site that was later put down. Some respondents stated that they use pages like eztv.it, which specializes in searching TV shows and documentary shows torrents.

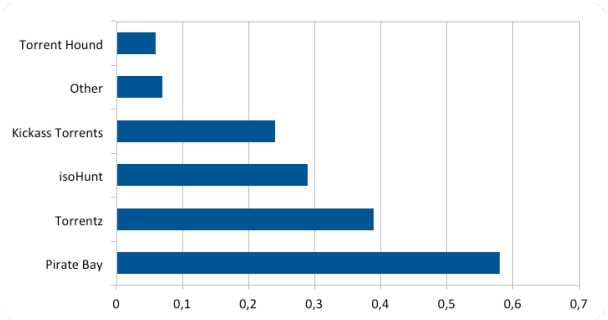

Table 4d. Most common torrent sites used for illegal access and/or download of digital media and cultural content

When it comes to using torrent clients, most commonly used clients are bitTorrnet and mTorrent. Out of 515 respondents 63% (325) use µTorrent client, and 44% (N=225) use BitTorrent client.

It was very interesting to see reasons that makes respondents illegally obtain digital media and content on the Internet. As we mentioned before, money can be of great issue, whether the reason is the (household) income level or the price of the product. This research confirmed that assumption. 40% (N=207) of respondents said that the main reason that they illegally access or download digital media and cultural content is the price of a certain product. But money doesn't always have to be the explanation behind the concept of digital piracy. 26% (N=136) of respondents said that illegal access or download enables them to obtain certain content faster than using legal means, i.e. they would need to wait for quite some time for certain media or content to become available in Croatia (blockbusters coming to the movies, music production companies issuing new albums, publishers publishing new books, etc.). Only 7% (N=35) use illegal access or download as way to *try out* the product they will later buy or obtain legally. Also, 7% (N=35) say they do it because everybody else is doing it (and getting away with it).

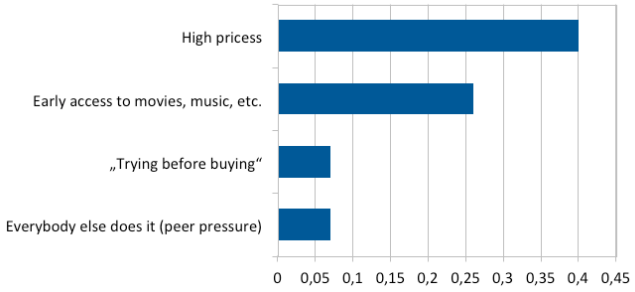

Table 4e. Most common reasons for illegal access and/or download of digital media and cultural content

When asked what do they do with the media and content that they've downloaded from the Internet – do they download it and consume it (use it), do they copy it and share it (distribute it), do they make profit by selling it to others or do they use it for public performances or display, do they use it to make their own content, etc. – respondents answered as follows. 91% (N=470) of respondents download and use the content for their own interest and fun. The minority of 4% (N=24) download and use the content while coping it and sharing it further. Also 4% (N=24) use the downloaded content to make their own creative work which proves that culture of remix and mashup still hasn't taken place in Croatian culture and society. Only 1% (N=5) makes profit out of further distribution of copyrighted content, and 2% (N=12) use the content for public performances.

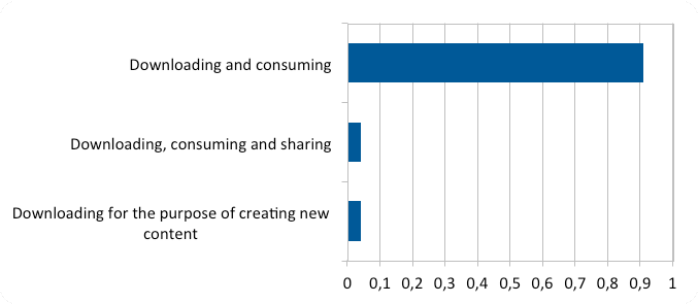

Table 4f. Further use of illegally accessed and/or downloaded digital media and cultural content

While most of the respondents choose to obtain digital media and cultural content through illegal means thus violating not only moral, but also author's economic rights, we found it important to ask the respondents how they would (re)act if they were the authors whose works were being distributed over the Internet, i.e. how they would choose to protect their work. All 535 respondents were to answer this question, whether they use legal or illegal ways to obtain digital media and cultural content.

42% (N=226) said that they would use open licensing system to protect their work thus enabling the public to freely download and use the content, but not to copy it, share it, or use it for commercial purposes. 38% (N=201) would protect their work according to standard Croatian copyright law, while 11% (N=60) would protect their work based on an open licensing system that provides users with the right to use, copy and share the content as long as it is done for non-commercial use. Only 9% (N=48) of respondents would license their work in a way that would allow coping, sharing and commercial use of the content (open licensing, attribution only).

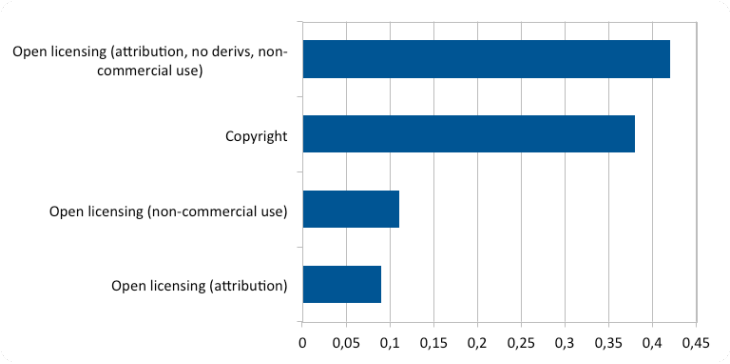

Table 4g. How would respondents license their own work on the Internet?

Perception of author's rights and copyright law

In the last question respondents were asked to rate the degree to which they agree or disagree with the following statements. They were supposed to rate their answers from 1 to 5, with 1 meaning "I completely disagree" and 5 meaning "I completely agree". 535 respondents were asked to rate 16 statements referring to the concept of author's rights and copyright law in the digital age.

The first statement was referring to respondents agreeing or disagreeing with the statement that the current copyright law should be reviewed and revised since it doesn't quite follow up on the advancements of the technology and new media, as well as the possibilities of ICT and its influence on culture and society. 32% (N=170) neither agrees, nor disagrees with this statement. On the other hand, 28% (N=149) completely agrees, and 21% (N=111) completely disagrees with the statement.

The statement that claims that illegal download of copyrighted material should be fined seems to be quite an unpopular method among respondents. 25% (N=134) disagree, and 43% (N=227) completely disagree with this statement, which makes total of 68% (N=361) respondents. Only 4% (N=22) completely agrees with the statement of fining the violators of copyright law.

Next statement refers to the previous one by asking the respondents to rate the level of their agreement or disagreement concerning the issue of punishing the violators of copyright law with prison time. Out of 535 respondents, 64% (N=386) completely disagree with this kind of punishment, while 12% (N=64) completely agrees with it.

The fourth statement was referring to the three strikes law. 41% (N=219) completely disagrees, and 22% (N=119) disagrees with the implementation of the Three strikes law.

When asked whether they agree or disagree with the statement that illegal download of copyrighted material has a negative impact on author's economic

rights by cutting back his financial gain, 28% (N=149) of the respondents neither agree, nor disagree with this statement, while the rest were divided in their views – 11% (N=59) completely agree, 17% (N=92) agree, 24% (N=128) completely disagree and 20% (N=107) disagree with the statement.

As with the previous statement, when it comes to the issue of alternative mechanisms to finance authors, e.g. alternative system of financing authors who would in return make their work available as a part of public domain, 32% (N=172) of the respondents think that such an option should be available, while the rest were quite divided in their views – 21% (N=112) completely agree, 27% (N=144) agree, 11% (N=59) completely disagree and 9% (N=48) disagree with the statement.

More than half of respondents agree or completely agree with the statement that broader public domain is necessary if we want to support society's intellectual and creative advancement, i.e. 29% (N=158) agrees, and 27% (N=144) completely agrees with this statement.

The next statement was referring to the issue whether freely available content on the Internet increases author's popularity and his visibility. 47% (N=251) of respondents completely agrees, and 27% (N=146) agrees with this statement.

Again, respondents were equally divided when asked if they agree with the statement that only the author who has his economic rights ensured, i.e. his financial gain guaranteed, is motivated to keep creating works (of art). 22% (N=115) disagrees, while 21% (N=113) agrees with the statement.

More than half of respondents, 60% (N=323) thinks that using illegally downloaded copyrighted material for educational purposes is completely all right and justifies. Only 9% (N=58) disagrees, and 11% (N=77) completely disagreed with this practice.

When asked should copyright law protect related rights as equally as author's rights, respondents were quite indecisive. 39% (N=210) neither agrees, nor disagrees, while 26% (N=137) agrees with this statement.

The next statement claims that users should always state the source from which the content was downloaded. 33% (N=178) completely agrees, and 27% (N=145) agrees with this statement. Only 9% (N=47) completely disagrees with the idea of specifying the source of digital media and cultural content.

In addition, most of the respondents agrees with the idea of mandatory attribution, i.e. 39% (N=208) completely agrees, and 27% (N=131) agrees with the statement that author of the work should always be attributed.

When asked whether they agree or disagree with the statement that fighting Internet piracy and copyright infringement is useless because *technology always wins*[13], 285 (N=148) completely agrees and 26% (N=141) agrees with the statement.

13 Technology advancement happens faster than law advancement, i.e. law has a problem

Next to the last statement claims that if there were an opportunity, users would rather buy directly from the author (paying less) than from the distributor. 28% (N=153) agrees, and 24% (N=128) completely agrees.

The last statement refers to the issue of relation between intellectual property and copyright and economy. The statement claims that intellectual property should be an important component of the growth of country's economy. 36% (N=192) were indecisive, i.e. they neither agree, nor disagree, while 24% (N=131) agrees, and 13% (N=68) completely agrees with this statement.

Confirming/disproving hypotheses

After analyzing the collected data, certain conclusions can be drawn regarding previously established hypotheses.

First hypothesis claiming that Internet users use modern digital technology to access and share copyrighted content, both legally and illegally is confirmed. Data shows that most of the respondents use Internet and peer-to-peer file sharing technology to access different content on the Internet and/or to share it and distribute it further despite the fact that the content is copyrighted and illegally placed on the network. Some respondents justifiably violate copyright law – the copyrighted content is no longer sold or the transaction costs of the Net are too high (Lessig 2004), but many more do it unjustifiably – instead of purchasing because the prices are too high, to access the content sooner or because everybody else is doing it.

Second hypothesis claiming that modern digital technology and networked environment change the perception of authorship and author's rights, i.e. that users ask for: A) new approach when it comes to protecting the rights of both, authors and users and B) new alternative mechanisms that will protect author's moral and economic rights, is also confirmed. Data shows that current legislation isn't effective in stopping the piracy for three reasons: 1) new technology enables users to circumnavigate the law, 2) users demand more freedom when it comes to accessing and using multimedia and digital content because they feel more empowered by technology and media they use, and 3) the rights of author (especially economic rights) can easily be violated by illegal upload and distribution of his creative work which, of course, raises the issue of alternative mechanism that will protect author's rights in the digital age while respecting users' freedom.

The research showed that most of the respondents use Internet as a tool to access and distribute creative content. Most often, they use peer-to-peer file sharing technology, especially BitTorrent protocol that is mostly used for illegal download of copyrighted material. Most of the respondents download movies and music because they find them too expensive to be bought on a regular

with following up on technology and new media.

basis (for entertainment, relaxation, etc.) or because they often cannot access them through official pages and services (e.g. streaming service that are "not available in your country"). This, in a way, confirms and justifies the fears of entertainment industry and legislative system who worry about the constant net harm caused by piracy. Moreover, it also confirms the common belief that music and movies (often perceived as entertaining cultural products) are pirated more than books (often perceived as edifying cultural products), especially since their commercial and profit-making nature requires them to have economic value approved through monetary transaction.

Data also confirmed that today's legal framework isn't effective enough in controlling and preventing piracy since all the necessary technology to circumnavigate the legal boundaries of the copyright law is at user's reach, it is quite cheap or free, and quite simple to use. However, though 70% of respondents said they obtain digital content by illegal download, most of them believe that authors should be paid for their work (they are not against author's economic rights) or at least they should be credited for their work through system of proper and fair attribution (they firmly support author's moral rights).

Thanks to peer-to-peer technology, as well as other technologies that enable and support sharing of creative content on the Internet, law can easily be bypassed, which our data also confirmed. However, that should not be the reason to prevent these and similar technologies to advance and progress or to forbid people to use them. What is necessary is to coordinate legal framework with technological change and technical progress and in due time respond to the demands of new digital technology and media. This reform is something that respondents in this survey also recognized as important and necessary. In this regard, public institutions and civil society organizations could be of great help. They could use their ideas, resources and activities to lobby for necessary legal changes, to protect moral and economic rights of authors and to protect the rights and freedoms of users while decreasing illegal download and sharing of copyrighted content.

If we consider the consequences of using modern technology for downloading, distribution and sharing and its impact on cultural production and the concept of authorship, if society is truly (and in its large part) founded in the act of copying (Boon 2010), if we perceive users not only as passive consumers but people who, with the help of modern technology, become active users or prosumers who both consume and produce new content (Medak 2008, 59), and if we consider the thought of French philosopher Roland Barthes who claimed that true meaning emerges in the moment of decoding the message (which could in this context be interpreted as the idea that it is the postmodern user, not author, who gives meaning to content[14]), then we can conclude that

14 Besides art and architecture, postmodernism can be seen in the consumer behaviour of users of the digital culture. The emphasis is on usage of goods, not their technical production, as Firat and Venkatesh (1993) would explain in their article "Postmodernity: the age of marketing". It is not until consumers consume the product that they acquire

today's copyright laws can be seen as remains of old times when cultural elite and industry had the leading word. But the lead changes in the new space of networked environment where users are free in the sphere of consumption and production of digital artefacts.

The vast and decentralized Internet space, peer-to-peer technology and new media, new forms of digital content and new users' needs influence and change the conditions of cultural production and distribution. Change is not necessarily a bad thing. It is, actually, quite an imperative. Law needs to find a way to adjust to the new terms and how to establish the balance between authors and users, i.e. between authors and their public more effectively and more creatively.

4. Conclusion and future directions

"How can you expect to handle the future if you can't even handle the present?"

(Daniel Suarez, Daemon)

Copyright laws confer the power to control the use of creative works (Spoo 2011, 39). As legal monopolies, whose terms are tightly bound to author's life and death, they prolong legal and economic consequences which sometimes constrain further acts of creativity and are often, and by many (e.g. Lessig, Patry, Baldwin and others), seen as excessive protection of copyright. That is not to say that law shouldn't be recognized and licenses shouldn't be applied, but society needs copyright reform that will make it fit for the digital age thus ensuring cultural diversity and free (as in freedom) access to copyrighted content. Besides protecting culture and its diversity, it should stimulate and reward creativity and foster innovation and technological development. To promote these goals, we should and must debate about copyright in the digital age, especially because Internet and digital technologies present us with unique opportunity to discover and enjoy our rich and diverse culture and to fulfil the expectations of our artistic and creative nature (Vassiliou 2013).

Peer-to-peer technology and BitTorrent protocol are one of the most known and used tools for distributing and sharing content on the network today. Though many from the creative and entertainment industry see them as bad things, this is not a good guy-bad guy story – it is simply a situation where much of it changes. And though many *torrent-evangelists* say it's a game over for the law, things aren't that black and white, for everything becomes enmeshed – art and law, creators and consumer, creativity and market. Lately, many of the economists, technologists, sociologists and journalists ponder over the issue of

meaning and (impressive and expressive) value. This is known as the reversal of production and consumption or value realization and it is one of three technical changes of postmodern consumption.

information technology, how it restructures global economics and how all the new technological set ups for sharing information quickly become means for circumnavigating the legal and business aspects of cultural industries. Even as we speak, new technologies like 3D printing change the way we comprehend the idea of copyright and intellectual property in art, architecture, design and tech-industries.

Technology and innovation have always preceded the law, which was often an underlying cause for breaking the copyright law or at least for changing and modifying it. With each new emerging technology there comes a need to revise the copyright law – from Gutenberg's printing press followed by England's Statute of Anne more than two hundred years later, up to the introduction of file sharing technology, e-readers, tablets, smart phones and other portable digital and networked media followed by different legal initiatives and treaties such as Anti-Counterfeiting Trade Agreement (ACTA), Stop Online Piracy Act (SOPA), Protect IP Act (PIPA) and others. What is important here is that relationship between new emerging technologies and copyright law should be based on the idea of creativity and technological innovation as cultural, social and economic leverage.

It is hard to impose any strict boundaries and restrictions on such a big, decentralized and non-hierarchical medium as Internet. Though different mechanism, such as DRM, try to stop copyright infringement, practice and statistics have shown that we need to support new and different ways of distributing, sharing and using digital content to satisfy the users' needs, but also find new mechanism and forms of licensing to protect authors and their creative work. The development of technology and new media supports the law of constant changes and these changes need to be adapted, but they also need to be put in relation to creativity, cultural diversity and further technological innovation.

> All we can do therefore is to map the changes we see in the hope of maintaining our grasp on our rapidly changing situation (Gere 2008, 10).

What this research showed is three things. First, users in the digital age are becoming more empowered by technology and new media and more aware of the issue of their own rights[15]. Second, *old* laws cannot properly answer the challenges new digital and networked technologies put before them. Third, the position of digital author changes, as well as his role and responsibilities in the creative process of manufacturing cultural content. Thus the law needs to follow on these changes while supporting users' rights and improving contractual

15 Since many of the users are actually digital natives it is quite understandable that their behaviour and perception of certain issues is different than of those who experienced the 'solemn life of purely analogue era'. They are installed with different moral imperatives which are based on the nature, architecture and design of the digital networks and digital media they grew u with, which then shape their attitudes, beliefs and behaviour and form different moral and social values ("we are all connected", "sharing is OK", "copying is easy", "egalitarianism", etc.).

position for authors. After all, it is the law and industry that serve authors and users, and not the other way around.

Lately, the law became a tool for protecting the entertainment industry and its lobbies. Too often do we witness the law serving the industry's legislative wish list instead of protecting the authors themselves. Many times it happens while breaking public's (digital) rights – right to privacy, right to free speech, right to access and use Internet. When it comes to the issues of copyright on the Internet, it becomes hard to differentiate between legal and illegal use of code and cyberspace as bricks in the great wall of DRM. Of course, the industry that stands behind the author supporting him and/or investing in him needs its interests and income to be protected. But protecting authors and their creative work must stand before protecting the industry behind it for law cannot be an ultimate solution to industry's business problems. In our attempts to protect authors and their creative works, as well as the workforce that stands behind them, we should do our best not to become supporters of hyper-capitalism and sheer profit. And since it takes a certain amount of awareness to avoid a scenario in which a handful of corporations would control, not only businesses, but culture and society's creative force, we must keep talking about issues that interlace the three C's – creative industry, copyright and culture – while doing our best to establish the win-win-win situation.

Law's first goal is to protect the balance between rights of creators and copyright holders and rights of the public, especially when new technologies and media keep challenging that balance. Therefore, as the future awaits us with more new technology and new dares we, as a society, need to reconsider the relationships between the four corners of digital culture, namely authors, industry, law and users, and all the issues these relationships impose. For instance, we cannot apply Cory Doctorow's model of "giving it away" (Doctorow 2008, 71) to all because we have to examine which kind of authors, which kind of creative works can fit in the free licensing model (since not all can profit, as Doctorow states, from guest lectures, public appearances and huge fandom), and which artists and works ask for an alternative mechanism that will protect them and their rights. Just as profound mystery and puzzling beauty of our universe can be explained and seen through the eyes of an artist, scientist and religious man, so can issues like copyright, author's rights and the position of cultural production be approached from different standpoints – those of an author, industry and consumer (public). Bringing it all together to create just and impartial creative ecology may turn out to be a true art – art of making spare and sensible copyright system that helps shape the future of digital culture.

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Sažetak

Autorska prava u digitalnom dobu: kako internet i *peer-to-peer* tehnologija za razmjenu podataka utječu na percepciju autorskih prava i njihovo kršenje

U kulturi binarnih sustava, digitalnih sadržaja i tehnoloških praksi autorska prava i zakon o autorskom pravu prolaze kroz određene promjene. Tehnološki razvoj postupno potiče razvoj novog koncepta autorstva i autorskih prava, promovirajući slobodni internet i digitalno tržište te stvarajući novo suvremeno iskustvo kulture utemeljene na digitalnoj tehnologiji, masovnoj komunikaciji i svijetu multimedije i virtualnosti. Unatoč tomu što računalna i digitalna tehnologija na različite načine služe i autoru i korisniku, obje su tehnologije ujedno i vrlo plodno tlo za razmjenu zaštićenih autorskih djela, što dovodi do pojave različitih oblika kršenja autorskih prava.

Cilj je ovoga rada identificirati i analizirati načine na koje računalna i digitalna tehnologija potiču razvoj novih trendova u području proizvodnje (npr. kultura *remixa*) i konzumacije i distribucije (npr. *peer-to-peer* tehnologija za razmjenu podataka) digitalnih kulturnih sadržaja, ali i utvrditi kako novi oblici distribucije i korištenja digitalnih sadržaja mijenjaju i oblikuju percepciju autorstva u 21. stoljeću. Kako bi analizirali prirodu, strukturu i dinamiku utjecaja novih digitalnih i mrežnih tehnologija na koncept autorstva i autorskih prava te kako bi ispitali konzistentnost postavljenih hipoteza, autori su proveli anketu među općom hrvatskom populacijom u dobi od 15 do 60 i više godina. Prikupljeno je ukupno 535 ispunjenih upitnika. Podaci su analizirani pomoću alata SPSS i metode kvantitativne analize. Posebna je pozornost posvećena konceptu autorstva u digitalnom okružju kao i konceptu *peer-to-peer* tehnologije za razmjenu podataka koja je, unatoč tomu što je prisutna već dulje vrijeme, još uvijek popularna mrežna arhitektura za distribuciju, korištenje i razmjenu digitalnih sadržaja.

Rezultati istraživanja pokazali su da većina ispitanika koristi *peer-to-peer* tehnologiju za razmjenu podataka kako bi pristupila digitalnim kulturnim sadržajima (npr. filmovima, glazbi, knjigama i sl.) te kako bi ih konzumirala i/

ili dalje dijelila putem mreže, kršeći pritom prava autora, odnosno nositelja autorskih prava. To je ujedno jedan od glavnih razloga zašto nositelji autorskih prava i kreativna industrija neprestano pokušavaju pronaći nove načine kako se boriti protiv *peer-to-peer* tehnologije, posebice kada je u pitanju komercijalna distribucija kulturnih sadržaja, čime ponekad ograničavaju kulturnu proizvodnju i tehnološki napredak. To dovodi do zaključka da novo dinamično, decentralizirano i distribuirano mrežno okružje utemeljeno na principima digitalne demokracije i participirajuće kulture *prosumera* traži određene izmjene zakona o autorskom pravu i nova rješenja o pitanju njegova kršenja. Istraživanje je pokazalo da se temeljno razumijevanje autorstva, tj. prava autora i drugih kreativnih djelatnika u kontekstu internetske kulture i digitalnih medija nije značajno promijenilo, no uslijed pojave novih načina digitalne proizvodnje i konzumacije kulturnih sadržaja, stavovi, navike i prakse korisnika doživjele su određene promjene. Sukladno tomu zakonodavstvo mora pronaći nove i drugačije mehanizme kako bi uspostavilo ravnotežu između potreba i prava autora i potreba i prava korisnika.

Ključne riječi: Zakon o autorskom pravu, autorska prava, digitalna kultura, *peer-to-peer* tehnologija za razmjenu podataka, mrežne tehnologije