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Copyright Infringement in the Information and Communication Technology (ICT) Era

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Abstract

Information and communication technology promote intellectual property in literary and artistic works. This has made the owners of copyright to enjoy the economic and moral rights of their creation and to become popular. It is also in this context that intellectual property industries tend to expand and innovate. Nevertheless, the spread of communication technology particularly through the digital space has become a threat to the intellectual property industry. The expansion of information and communication technology enabled the violation and infringement of intellectual property rights. This article will help owners and holders of copyright to have some hint on, the notion of copyright protection, copyright infringement in information and communication technology, and copyright infringement, the foundation of copyright infringement, infringement of literary and artistic works, and infringement of related neighbouring rights. This is because knowledge of the fundamentals of intellectual property can help, forestall, to a greater extent copyright infringement through cyberspace. States and the International Community are also invited to regulate the domain by devising new strategies to protect copyright owners and holders against any infringement of their rights.

Keywords: Copyright, Infringement, New-Information, Communication, Technology Era

1. Introduction

Intellectual Property infringement has to do with the violation of the rights of intellectual property creators. Infringement of intellectual property rights starts when a literary, artistic work or a trademark and industrial design protected by Intellectual Property Laws is used, copied, pirated, or otherwise exploited without proper authorization from the owner of the rights. A good example of intellectual property infringement is piracy, counterfeiting, and subconscious copying. Copyright infringement in the new information and communication technology era became alarming when the copyright industries received the dot com boom but later encountered problems from the technological setback which the copyright industries are still to heal from. Infringement of copyright in the new information and communication technology era started when internet adventurers began applying illegal techniques to duplicate the literary or artistic works into numerous copies quite enough to

damage and disrupt the market of the owners of the copyright thereby, depriving the copyright creators of the rights. The development of information and communication technology facilitated the violation of intellectual property rights at a high level. This is because several websites that permitted uploading and downloading of video and audio files were created and pirates used the opportunity to use this website illegally to the detriment of intellectual property rights owners¹. A sad situation is the fact that most people do not upload or download their videos and audio files but infringed the rights of others by uploading film clips and music files of others.

2. Copyright Protection

Copyright is the branch of Intellectual Property Law that seeks to protect the rights of intellectual property creators from the infringement of their original literary and artistic creations (Fishman, 2008:10).² Copyright is concerned with all forms or methods of communication and writings such as printed publications, films for public exhibition in cinema, sounds and TV broadcasting, novels, musical compositions, photographic works, drawings, just to name a few. Copyright is the protection by law for innovative works of creators fixed in a concrete standard of expression. Copyright protects whether published or unpublished literary and artistic works³. Copyright law is a set of intellectual property laws, which protects innovative works of copyright holders including musical, literary, dramatic, and artistic work, such as songs, novels, poetry, movies, computer software, and style. Copyright does not protect systems, facts, ideas, or methods of operation, although it may protect the way these things are expressed⁴.

The reason here is that the expression of an idea in an identity form capable of being attributed to a person is of great importance for the purported intellectual property creator to seek for his rights. That is, the idea should be manifested or be in a visible form or fixed on something tangible. This means copyright law will not protect just the idea but how such idea is expressed. Section 3 (2) states that “Copyright shall relate to the expression through which ideas are described, explained, and illustrated. It shall cover the distinctive structures of works, such as the plan of a literary work insofar as it is materially linked to the expression.” Subsection 3 of the Copyright law in Cameroon protects only expressions of original distinctive features resulting from creation.

The position of the TRIPS Agreement is that copyright will extend only to expressions and not ideas, procedures, methods of operation, or precise concepts as such⁵. It drives further to describe computer programs, whether, in source or object code as a literary work under the Berne Convention, Article 10(2) likewise seeks to protect compilations of data or other material, whether in machine-readable or another arrangement, which by motive of the selection plan of their content comprises intellectual creativity and will be protected as such. This protection, which will not cover data or material itself, shall be without bias to any copyright subsisting in the data or material itself⁶.

Copyright is however distinct from patents as it protects the original work of intellectual property creators, while a patent protects discoveries or inventions. Inventions or discoveries and ideas are not protected by copyright law though their manner of expression may be protected. The Cameroon Copyright law is clear in section 3 (2) that Copyright is related only to how ideas are expressed, described, explained, and illustrated. It shall cover the distinctive features of works, such as the plan of a literary work insofar as it is materially linked to the

¹ The term —Internetl is used throughout this Article as a generic term for any type of electronic communication, even if it is not based on the Internet protocol. For a discussion of the current use of the term, see Marketa Trimble, *The Future of Cybertravel: Legal Implications of the Evasion of Geolocation*, 22 *FORDHAM INTELL. PROP. MEDIA & ENT. L.J.* 567, 575 n.25 (2012).

² Fishman (2008) describes copyright as a legal device that provides the creator of a work of art or literature, or a work that conveys information or ideas, the right to control how the work is used. The intent of copyright is to advance the progress of knowledge by giving an author of a work an economic incentive to create new works. It is a legal regime that provides a limited form of monopoly protection for written and creative works fixed in a tangible (material) form.

³ Definition of copyright. Available at: <http://www.copyright.gov/help/faq/faq-general.html>. accessed on September 11, 2021

⁴Ibid.

⁵ See article 9(1) TRIPs Agreement, part ii- standards concerning the availability, scope and use of intellectual property rights, available at: http://www.wto.org/english/docs_e/legal_e/27-trips_04_e.htm< accessed on September 11, 2021

⁶ See article 10(2) TRIPs Agreement, part ii- standards concerning the availability, scope and use of intellectual property rights, available at: http://www.wto.org/english/docs_e/legal_e/27-trips_04_e.htm< accessed on accessed on September 11, 2021

expression. A trademark protects symbols, phrases, words, or designs identifying the source of the services or goods of one party and distinguishing them from those others⁷.

Nevertheless, though copyright is attributed to an intellectual property creator and related or neighbouring rights to a performing artist, Copyright and Neighbouring rights⁸ are some of the key components of Intellectual Property Rights Protection. Today, Copyright is used as a tool to protect the patrimonial and paternity, and integrity rights of intellectual property creators in their creations and community access to these creations' copyrights and neighbouring rights also promotes creativity and disseminates the cultural heritage of a nation. This means copyright and neighbouring rights are significant for Cameroon's development process and should be protected from infringement.

Copyright extends to all varieties of literary, artistic, and musical works. To be eligible for copyright protection, however, such works must satisfy additional criteria, which find their source in the constitutional provision empowering Congress to enact copyright legislation⁹. Copyright is a bundle of rights. Copyright in a work includes the exclusive right to:

- Reproduce the work (this includes reproducing it in sheet music or on records or synchronizing it in films, television programs, and advertisements)
- Publish the work (e.g., by lawfully supplying copies of it to the public)
- Communicate the work to the public (examples include live performances, playing recorded music in public, playing music on the radio, television and, vitally to the modern music economy, via the internet) and
- Make an adaptation of the work (e.g., arrangements, transcriptions, parodies).

2.1. The notion of copyright protection

The creative work of an author gives him/her a right over such work as —property rights. The exclusive rights or the restricted acts are granted to the author by copyright law. These rights can be either assigned or licensed by the owner of the copyright. Any invasion of this right we refer to in law, as infringement entails action. Infringement occurs when the exclusive rights granted to the owner by the copyright laws have been violated¹⁰. As already discussed in the previous chapter, there are economic rights granted to an author having exclusive rights and any person who interferes with these rights will be liable for infringement.

The infringement of the authors' work may be of a right of reproduction, distribution, adaptation, communication, public performance, display, rental and lending rights, and on-demand availability rights. The owner of a copyright can bring an infringement action against the person involved in the invasion of rights. An exclusive right to do an act lies with the owner and it follows that any third party attempting to do such acts to which only the owner is entitled, will be liable for infringement. The action for infringement of copyright will entail the perpetrator not only to a civil suit but also criminal action. Infringement may be committed by those engaged in the production or supply of infringing copies for commercial purposes (Lloyd, 1997:306)¹¹. Simultaneously, when an infringing copy is made available to the public, the owner will have a right to restrain such acts.

⁷ Definition of copyright. Available at: <http://www.copyright.gov/help/faq/faq-general.html> accessed on September 02, 2021.

⁸ Neighbouring rights according to Article 56 (1) of 2000 Copyright Law in Cameroon are the right of performing artists in their performances, right attributed to producers of phonograms and video grams in their phonograms and video grams, and the right attributed to audio-visual communication companies. This right comprises the activity of broadcasting organizations in their radio or television programs. This means related or neighbouring protect those who assist intellectual property creators to facilitate the communication of their literary or artistic works to the entire public. Thus, Articles 57 and 58 of the 2000 Copyright Law in Cameroon gives a related right to performing artist.

⁹ Article I, section 8, clause 8 of the Constitution gives to Congress the power —to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. Not only does this provision ensure that federal copyright may not be of perpetual duration, but it also requires by other person(s) other than the author himself, thus the creativity of human mind must be Seen that the congressional grant of copyright be to —authors for their —writings.

¹⁰ Infringement is an act that interferes with one of the exclusive rights of a patent, copyright or trademark owner. Black's Law Dictionary, 8th ed., Thomson & West.

¹¹ See Ian J Lloyd (1997) *Information Technology Law*, 2nd ed. Butterworth.

Copyright also vests in authors of sound recordings, films, broadcasts, cable programs, and typographical arrangements of published editions. Several copyrights can exist in one work¹². Bainbridge (2009) argues that copyright is a property right that subsists (exists) in the various "works", for example, literary works, artistic works, musical works, sound recordings, films, and broadcasts.¹³

While balance is at the heart of copyright theory, in practice, modern copyright law is fundamentally tilted in favor of copyright owners. Overall, the accommodation of the interests of rights holders and users reflected in current copyright systems focuses overly strongly on owners' exclusive rights while giving insufficient weight to the interests of users (Lessig, 2004; Benkler, 2003; Boyle, 2003)¹⁴. Part of the explanation for copyright distributional problems is that the main theoretical justifications for copyright are themselves usually skewed in favor of stronger copyright. As a utilitarian bargain, copyright provides incentives to investors to produce and distribute knowledge and cultural goods (Cited in Fisher, 2001:168)¹⁵. This is said to advance the public interest by promoting progress and the dissemination of new works.

Copyright is a legal concept, enacted by most governments, giving the creator of an original work exclusive right to it, usually for a limited time (WIPO, 2016:11)¹⁶. Generally, it is "the right to copy," but also gives the copyright holder the right to be credited for the work, to determine who may adapt the work to other forms, who may perform the work, who may financially benefit from it, and other related rights. It is a form of intellectual property (like the patent, the trademark, and the trade secret) applicable to any expressible form of an idea or information that is substantive and discrete.

The concept of expression of ideas of copyright and infringement in Cameroon as well as many other African countries are not well understood by most people especially underground artists. Most of their songs have been stolen by either music producers or prominent artists. The underground artist provides lyrics to the music producer, producer later on giving the same lyrics to the prominent artist who automatically became the first person to express it to the public and granted copyright protection leaving the underground artist claiming the ownership of the lyrics without legal basis.

3. Copyright Infringement in Information and Communication Technology

A creator of a literary or artistic work has exclusive rights over his work to copy, modify, display, and distribute his work as he deems fit. Therefore, anyone who does any of the above without the authorization of permission from the original owner is said to have infringed the copyright of the creator. However, to allege or prove infringement, the plaintiff must, first of all, demonstrate a practical resemblance existing between his creation and the alleged infringed work and also, that the perpetrator of copyright infringement had access to their original work. Music and movies are the two highest forms of entertainment that suffer from substantial volumes of copyright infringement. Infringement situations may lead to liabilities, which are sums set aside in the circumstance of a likely claim.

Copyright infringement characteristically includes somebody not being the author using another person's original artistic or literary work, or a copyrighted work, without authorization from the owner. That is the use or reproduction of copyrighted material with no authorization from the copyright owner or holder. Infringement of copyright signifies that the rights afforded to the copyright owner, for example, the exclusive right to use his work for a specified time are being breached by another person not being the author.

¹² Section 5 of the Copyright and Neighboring Rights Act, [Cap.218 R.E.2002] 1999.

¹³ Section 5 of the Copyright and Neighboring Rights Act, [Cap.218 R.E.2002] 1999.

¹⁴ 234 Analysis in scholarship on this point is very extensive. Some of the most important scholarship in this area includes: Lawrence Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (Penguin Press, 2004); Yochai Benkler, "Freedom in the Commons: Towards a Political Economy of Information" (2003) 52 *Duke Law Journal* 1245; Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale University Press, 2006) 23; James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain* (2003)

¹⁵ See Neil Weinstock Netanel, "Copyright and a Democratic Civil Society" (1996) 106 *Yale Law Journal* 283, 288, quoted in William Fisher, "Theories of Intellectual Property" in Stephen R. Munzer (ed), *New Essays in the Legal and Political Theory of Property* (Cambridge University Press, 2001) 168, 173.

¹⁶ See World Intellectual Property Organization. "Understanding Copyright and Related Rights". *WIPO*. pp. 6–7. Retrieved January 26, 2013

To understand the factors influencing the extent of copyright infringement, the scope and intensity of copyright protection is the best measurement. Again, with only a few exceptions, the studies have focused on a single industry—software, music, or films. In software, the practice has been found to vary inversely with the level of economic development and income, the strength of the legal and judicial system, and retail prices of authorized products, although not consistent with education. Several empirical studies find that the perceived probability and severity of penalties have a strong effect on file-sharing. Moral considerations also play a role in the sense that concern for rights holders and artists reduces the propensity to engage in file-sharing, and this varies by country. Most studies conclude that students, young adults, and young males, in particular, are more likely to engage in infringing copying than other demographic groups.

For there to be copyright infringement in the new information and communication technology era, it is essential to ensure that the work is within the category listed by national or international law, for there are different requirements mandatory for different categories of works. There are many types and forms of copyright infringement in the new information and communication technology. An example of actions that may be accepted as copyright infringement is when the perpetrator of the act carries out his illegal activities without seeking authorization from the rightful holder, author, or owner of the copyrighted literary or artistic work. For instance:

- a. The circumstance of unauthorized or illegally downloading of music or films without paying for their use to the copyright owner or holder;
- b. The recording of a film in a movie theater by a third party without permission from the creators;
- c. Cases of use of a copyrighted image found on a company's website;
- d. Modifying an image and then displaying it on a third-party company's website;
- e. Posting a video on a third-party company's website which topographies copyrighted words or songs;
- f. Using a musical group's copyrighted songs on a third-party company's website;
- g. Copying any literary or artistic work without a license or written agreement authorizing the copying and;
- h. Creating merchandise for sale which features copyrighted words or images.

4. Information Communication Technology (ICT) and Copyright Infringement

ICT refers to an extensional meaning for information technology (IT) that regulate the role of combined communications and the incorporation of telecommunications (wireless signals and telephone lines) and computers as per the International Federation of Global and Green IC (IFGICT)¹⁷, as well as essential enterprise storage software, audiovisual, and middleware, that enable users to access, transmit, store, understand and manipulate information as per the international federation of ICT.

ICT particularly the electronic media via digitalization has facilitated copyright infringement through the process of copying or downloading, spamming, publishing, and even the distribution of numerical copies with ease. The rapid increase of ICT has raised several worries about the strength of our present copyright laws in avoiding copyright infringement through cyberspace and other media outlet.

The speedy expansion of cyberspace in all parts of the globe has encouraged almost everyone with a computer a potential publisher. The evolution of cyberspace has had major insinuations for the action and protection of copyright works and other associated intellectual property rights that are published in digital form in cyberspace (Mambi, 2010:12)¹⁸.

¹⁷ IFGICT is an independent organization created takes the lead and set industry standards for the talent development profession in ICT and business technology.

¹⁸ ICT Law Book a Source Book for Information and Communication Technologies & Cyber Law 2010 Edition by Adam J. Mambi, Mkuki na Nyota Publishers.

Technological developments have made copyright work easier to access and reproduce and more problematic to protect. Recently with the implementation of the two WIPO cyberspace treaties in 1996¹⁹, that is, the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), countless changes have occupied the minds of authors and some other persons involved in the copyright field, as a result of digital technology, opening new horizons for composers, artists, writers, and others to use the cyberspace with confidence to create distribute and control the use of their works within the digital space.

5. Foundation of Copyright Infringement

Copyright is one of the important pillars of the doctrine of Intellectual Property²⁰. My understanding as a thinker, intellectual property simply means the works that result from the emanation of the human mind. Thus, it incorporates the following; first, the human mind, second the manifestation of the human mind, and last the results of the creativity of the human mind²¹. The aspect of Copyright in the digital environment is widely and extensively discussed in most Intellectual Property and Information, communication, and Technology Law texts. This article describes different methods that are used for copyright infringement in the digital environment, whether accidentally or intentionally, and at the end to see whether or how the Act has responded to the said online activities. The attempt here is simply to familiarize the reader with a careful understanding of the term copyright and its brief history in Cameroon, also copyright infringement, and how these copyright infringement activities have affected the protection of copyright in Cameroon and the eligibility of the concerned law.

5.1. Infringement of Literary Works

As a general rule, for there to be an infringement of a literary work, two things must be shown that is access and similarity of the original copy. Though, there are several additional complications to demonstrating infringement of a literary work than another category of infringement, such as a musical work. Several fundamentals of a literary work may be recurrent from one work to the subsequent and may be common to many works. Judges in some courts have tried on several occasions to characterized common elements and those unique or original to an author. This is due in part to the fact that courts must differentiate between the idea of the author and the form of expression for the idea, also known as the idea-expression dichotomy.

Two types of infringement are envisaged under copyright law, one where alleged infringement occurs or is committed by the person copying, and secondly, it occurs where the infringement has purported to authorize a third party to do any act which is within the scope of the copyright or a related right or has in some way contributed to the infringing act of a third party. In India and the U.K, the copyright law provides a specific provision stating that any authorization to commit an act which infringes copyright is itself an infringement of copyright. Copyright is infringed by a person who without the license of the copyright owner does, or authorizes another to do, any of the acts restricted by the copyright²². Infringing copy means a copy of a work made without the authority of the owner of the reproduction right in a work²³. An infringer is a person who interferes with one of the exclusive rights of patent, copyright, or trademark owner. As Louis Brandeis in *International News Service v. Associated Press* (1918)²⁴ put it at the beginning of the previous century: ‘The general rule of law is,

¹⁹ The organization administers the WIPO Copyright Treaty and the WIPO Performances and Phonogram Treaty (known together as the "Internet Treaties"), which set down international norms aimed at preventing unauthorized access to and use of creative works on the Internet or other digital networks.

²⁰ Bainbridge argued that, intellectual property is concerned with the legal rights associated with creative effort or commercial reputation and goodwill. It is very wide and includes literary and artistic works, films, computer programs, inventions, designs and marks used by traders for their goods and services. David I. Bainbridge, *Intellectual Property*, Seventh Edition, Pearson Longman, Ashford Colour Press Ltd, Gosport, 2009. p.3.

²¹ For example, in copyright ideas are not protected but the expression of ideas. The ideas is expressed when seen

²² See Section 51 (India) & U.K Copyright, Design and Patent Act, 1988 (herein after referred as CDPA), Section 16(2), *Falcon v Famous Players Film Company* (1926) 2 K.B. 474 (authorize means —sanction, approve, countenance)

²³ Though Berne Convention does not define the term infringing copy but provides for seizure of infringing copies of a work.

²⁴ See the Columbia Symposium, *Product Simulation: A Right or a Wrong*, 64 *Columb. L. Rev.* 1178 (1964), for a group of articles on INS and related case law. See also Dennis Karjala, *Misappropriation as A Third Intellectual Property Paradigm*, 94 *Colum. L. Rev.* 2594 (1994) (arguing for application of INS misappropriation doctrine to data retrieval systems); Leo J. Raskind, *The Misappropriation Doctrine As A Competitive Norm of Intellectual Property Law*, 75 *Minn. L. Rev.* 875 (1991) (criticizing misappropriation doctrine); Richard H. Stern & Joel E. Hoffman, *Public Injury and the Public Interest: Secondary Meaning in the Law of Unfair Competition*, 110 *U. Pa. L. Rev.* 935, 966-971 (1962) (arguing that misappropriation doctrine is anticompetitive and too vague to serve any predictive function).

that the noblest of human productions knowledge, truths ascertained, conceptions and ideas become, after voluntary communication to others, free as the air to common use²⁵. This freedom of use of knowledge products is the main characteristic of the new digital environment which challenges traditional copyright law. Indeed, the development and diffusion of digital technology permit the unauthorized creation of unlimited and costless copies and worldwide distribution of protected works²⁶. The copyright industries are responding by using anti-circumvention measures such as encryption technologies.

6. Infringement of Artistic Works

While copyright infringement has always been a problem, hardware technology available in the past had a limiting effect. Music stored on compact discs could be duplicated onto a computer, but the sheer size of the file would inhibit the popularity of digitizing songs.

The size of the files would also prohibit users from sharing these files with other computer users since floppy disks could not hold the full-length music files, and the time needed to transmit a file over the Internet was extremely lengthy. A new audio format, however, addresses these concerns.

Many changes have taken place in the way music is recorded and distributed, such as creators' capacity to self-publish and self-distribute; this means that recording studios and labels are no longer, in theory, a necessity. Yet, even with this flexibility, many creators are not making more money and may not even be making a living wage. Also, there is a host of new distributors of legitimate copies that are frequently not involved in owning the copyright in the works that they distribute²⁷. Music producers and distributors have also faced many challenges, including technological developments (Wu, 2010)²⁸. Both groups in varying ways and degrees have adjusted to those developments²⁹. This adjustment does not necessarily mean success; it may mean getting out of the business. The central utilitarian rationale of copyright law is that creators can be sufficiently rewarded that they are incentivized to continue to create (Picker, 2002).³⁰ Copyright has consequently been an important tool in much economic activity of the creative industries. However, copyright's role is not to support incumbent business models, but rather to support creativity. A key part of supporting creativity should be for artists and creators (in

²⁵ *International News Service v. Associated Press*, 248 U.S. 215 (1918), also known as *INS v. AP* or simply the *INS* case, is a 1918 decision of the United States Supreme Court that enunciated the misappropriation doctrine of federal intellectual property common law—that a "quasi-property right" may be created against others by one's investment of effort and money in an intangible thing, such as information or a design. The doctrine is highly controversial and criticized by many legal scholars, but it has its supporters.

²⁶ The *INS* decision recognized the doctrine of U.S. copyright law that there is no copyright in facts, which the Supreme Court later greatly elaborated in the *Feist* case in 1991, but nonetheless *INS* extended the prior law of unfair competition to cover an additional type of interference with business expectations: "misappropriation" of the product of "sweat of the brow." The case was decided during a period when a body of federal common law existed for business practices and torts, which the Supreme Court had power to declare or create, but two decades later the Supreme Court abolished that body of substantive law and held that state law must govern the field henceforth. Accordingly, the *INS* case no longer has precedential force, although state courts are free to follow its reasoning if they so choose.

²⁷ Online service providers, such as Google or YouTube, that distribute copyright works are examples. A different sort of distribution entity that does not own copyright includes some streaming services. An example is Spotify which licenses, rather than owns, the copyright in the content it makes available. This contrasts to the predominant business model in the analog world where the record labels (and in other industries such as book publishers) owned copyright and controlled distribution. See John Seabrook, *Revenue Streams: Is Spotify the Music Industry's Friend or its Foe?* *The New Yorker*, (Nov. 24, 2014), <http://www.newyorker.com/magazine/2014/11/24/revenue-streams> [<http://perma.cc/9ZMU-DH7A>].

²⁸ See Jim Rogers, *The Life and Death of the Music Industry in the Digital Age* 21 (2013) (discussing how the music industry has developed and how the digital revolution is changing it); see also Tim Wu, *The Master Switch* 13-14 (2010) (discussing the challenges of the Internet in our society and particularly its role as a communicator and distributor of information).

²⁹ See Tim Wu, *The Master Switch: The Rise and Fall Of Information Empires* 97 (2010); see also Justin Hughes, *On the Logic of Suing One's Customers and the Dilemma of Infringement-Based Business Models*, 22 *Cardozo Arts & Ent. L.J.* 725, 737-38 (2005) (giving an overview of the decline of US music industry revenue)

³⁰ See Randal C. Picker, *Copyright as Entry Policy: The Case of Digital Distribution*, 47 *Antitrust Bulletin* 423, 424 (2002), (noting that "the copyright statutes reflect substantial path dependence, as well as the play of powerful interests"); see also Jessica Litman, *Digital Copyright* 70 (2001) (commenting on the US 1976 Copyright Act, stating, "Most of it was drafted by the representatives of copyright-intensive businesses and institutions, who were chiefly concerned about their interaction with other copyright-intensive businesses and institutions."). Additionally, one need only look at the response of the music industry to declining revenues as requiring better enforcement of copyright to see the importance of copyright to the music industry. See generally Annemarie Bridy, *Is Online Copyright Enforcement Scalable?* 13 *Vand. J. Ent. & Tech. L.* 695, 711 (2011) (discussing the industry data on infringement and its self-perpetuating claims that infringement is massive and the appropriateness of the Digital Millennium Copyright Act as a response to those apparent increases. Bridy notes that "there is, however, some truth behind the hype. Notwithstanding the copyright industries' propensity to exaggerate their losses, or the fastness and looseness with which their statistics are (re)circulated by uncritical government officials and media outlets, there can be little question that P2P networks have facilitated large-scale infringement, or that the volume of files traded illegally by means of such networks has been, and remains, large and revenue-depleting.").

copyright terms, the "authors") to make a living, even if what an author is - and the extent of that rationale - is disputed³¹.

This new technological advance, which threatens to undermine copyright law, is the new digital music format: Motion Picture Experts Group Audio Layer 3 or MP3³². Unlike music on cassettes or CDs, MP3s are completely digital and are not bound to any physical medium. MP3s employ a method of file compression called "perceptual audio coding" methods. By stripping away digital information inaudible to the human ear from the sound recording, much of the sound data can be discarded from the digitized file. This allows very large music files to be digitized in minimal amounts of space. The result is a file that challenges CDs for quality but that is comparatively much smaller than an uncompressed file. The rate of file compression is typically between 10: 1 and 12: 1. As these files are a fraction of the size of a regular CD file, the compact disc is no longer necessary as a storage device for music.

The expansion of the average-sized hard drive along with the decreasing prices of memory storage has made it economically practical to store vast numbers of music files on one's personal computer for later listening. Whereas an uncompressed music file required approximately 50 megabytes of hard disk space, the typical MP3 is less than 5 megabytes in size (Selby, 2000)³³. While an uncompressed music file could take two hours to download or transfer to another user on the Internet using a 56kbs. Modem, a compressed MP3 can be downloaded in about 5 minutes. The advent of MP3s and file-sharing technologies have completely changed the Internet music environment. The small size of MP3s and the file-sharing technology available make it easy and inexpensive for users to seek and copy digital music over the Internet.

Compression technology coupled with the advance in modem speeds and the fast expansion of the Internet has made the sharing of MP3s a problem unforeseen in the past.

7. Infringement of Related and Neighboring Rights

Related rights or neighboring-rights according to section 56 (1) of 2000 copyright law refers to the rights of performing artists in their performances, the right of the producer of phonogram and video-gram in their phonogram and video-gram and the right of a broadcasting organization (audio-visual communication companies) in their radio and TV programs. Protection of those who assist intellectual creators to communicate their message at large and to designate their work to the public in an attempt means related rights. Works of the mind are created to be discriminated against among as many people as possible. This cannot be done generally by the author itself for it requires intermediaries whose professional capacity gives the work those forms of presentation that are appropriate to make them accessible to a wider public. The play needs to be presented on the stage, some need to be performed by an artist, reproduce in the form of record, or broadcast utilizing radio facilities. All persons who make use of literary, artistic, or scientific work to make them publicly assessable to others require their protection against the illegal use of their contract in the process of communicating the work to the public. The protection of another interest does not consist merely in granting of the authorization to prevent the use of their creation and is not limited in prohibition, the infringement of the rights that the law affords to authors. The work is intended to be made available to the public at large in various ways, for instance, publishers reproduce his manuscript in a final form without adding to the expression of the work as created by the author. The problem with this category of intermediary has become more acquainted with rapid technological development. At the very beginning of the 20th century, the performance of dramatists, actors, or musicians

³¹ In this Article, "authors" is synonymous with creators (individuals and groups), rather than corporate owners or distributors, which might otherwise be called cultural businesses or industries. The role of authorship is seen as paramount by some. See Jane C. Ginsburg, *Exceptional Authorship: The Role of Copyright Exceptions in Promoting Creativity, in Evolution and Equilibrium*, supra note 1, at 15-28 [hereinafter Ginsburg, *Exceptional Authorship*]; see also Jane C. Ginsburg, *The Author's Place in the Future of Copyright*, 45 *Willamette L. Rev.* 381, 383 (2009) [hereinafter Ginsburg, *Future of Copyright*]; Jane C. Ginsburg, *The Concept of Authorship in Comparative Copyright Law*, 52 *DePaul L. Rev.* 1063, 1085 (2003) [hereinafter Ginsburg, *Comparative Copyright*]. Others contest that centrality of authors. See, e.g., Oren Bracha, *The Ideology of Authorship Revisited: Authors, Markets, and Liberal Values in Early American Copyright*, 118 *Yale L.J.* 186, 188 (2008); see also *The Construction of Authorship* 359 (Martha Woodmansee & Peter Jaszi, eds., 1994).

³² See "MPEG Audio Layer-3," online: Fraunhofer Institute for Integrated Circuits <iis.fhg.de/amm/techinf/layer3/index.htm> (last accessed: 4 November 2001).

³³ See J. Selby, "The Legal and Economic Implication of the Digital Distribution of Music: Part I" (2000) 11: *I Ent. L. Rev.* 4 at 6.

ended with the play or concert in which they perform. It is no longer so with the advent of the phonogram, radio, motion picture, TV, video-gram, etc. technological development has made possible the fixing of performance on the varieties of materials e.g., records, tapes, cassettes, CDs, films, etc. what was earlier a localized and immediate phase of performance on a hall before a limited audience become an increasing performance exercise before an equally unlimited audience that went beyond national frontiers.

The development of broadcasting and more recently T.V also has similar effects. This technological innovation has made possible to reproduce individual performance by performing artist and to use them without their presence and the user being oblige to reach an agreement with them. These have led to a reduction in the number of live performances. It has created what has come to be known as technological unemployment among performing artists thus giving a new dimension to the protection of the interest of performance. The appeal of the phonograms and easy availability in the market of a variety of increasing production create the growing problem of piracy which has become a worldwide scourge. So, the international convention for the protection of performance, producers of phonograms and broadcasting organization (the Rome Convention 1961), and national laws, therefore, provides limitations and rights allowing e.g., private use, use of such except in connection with reporting of current events and use for the teaching of scientific research of protected performances, phonograms and broadcasting. By article 14 of the Rome Convention, the duration of the protection of related rights is 20years from the end of the year. In the TRIPS Agreement Article 14(6) the rights of phonograms are to be protected for 50years from the date of fixation or the performance and the right of broadcasting organization for 20years from the date of broadcast.

Internet users can also utilize commercial sites like "Yahoo! GeoCities" and "Tripod.com," which offer free space to host a personal website in return for hosting advertisements on the page.³⁴ This allows the average Internet user to create a website and provide information and files of any type to users around the world, provided they stay within their spatial limit as dictated by the service providing the hard disk space.

The ease with which a person can now offer information over the Internet creates complex challenges for the owners of intellectual property. A user can easily create a web page that displays the contents of a book, which is copyrighted in its entirety, or that displays a trademark, using very little file space. Detecting such acts and forcing the removal of material can be onerous as the computer on which the files reside could be in one country, while the person who posted the material could be residing elsewhere. The anonymity of the Internet also makes it difficult to find the person responsible for such acts. While music files have traditionally been excluded from such piracy because of the sheer size necessary to copy a single song into a digital format, the advent of MP3 technology has drastically reduced the amount of space required to digitize a music selection. Whereas the resources necessary for music piracy previously made it impractical, users can now easily post or transmit pirated sound recordings over the Internet.

8. Conclusion

Copyright infringement in the information and communication technology era has become predominant in modern times. Cyberspace is the biggest threat to Copyright holders due to the characteristics of communication technology. The unusual feature within the information and communication technology era is that it is not easy to determine whether a particular piece of work was copied from a protected work being an infringement of the original. On the other hand, in a concrete standard, such a difference can be easily determined. Infringement may not always be deliberate. It may also be due to ignorance. Thus, information and communication technology is more of a curse than a blessing to intellectual property creators and holders of copyright. Copyright infringement in the information and communication technology era may occur differently; for instance by framing links catching public display of the rights and by uploading on the Internet. Whether intentional or ignorantly, copyright infringement is considered a violation of the rights of the intellectual property creator or copyright holder and liability should rest on the perpetrator.

³⁴ See, e.g., "Membership Brochure," online: Yahoo! Geo Cities www.geocities.com/join_info.html (date accessed: 3 December 2000), which describes the advantages of maintaining a web site on "Yahoo! Geocities" including 15 Meg of personal webspace free.

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