Online Copyright Infringement

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Abstract:- Cyber security has become a burning issue over the years courtesy of internet loopholes, and thus giving room to cyber security threats like online copyright infringement. There are many forms of cyber security. In this study, online copyright infringement will be majored on. Online copyright infringement takes place in different forms with some forms taking place without the committer knowing whatever he/she is doing is a crime. The crime has been growing as years pass by and there seems to be no solution to this crime but instead people are learning to normalize it. Without proper control measures, the menace will end the value of the media industry on the internet. Online copyright infringement is a crime that goes against the ethical conduct on the internet with the major victims to this menace being intellectual property owners like artists. If not well controlled, these artists will come to a point of earning nothing from their works. Online copyright infringement is expounded through examples and illustrations which will help the reader understand the intensity of the crime.

I. INTRODUCTION

Copyright infringement is one of the major threats in the field of cybersecurity. A copyright is a type of security indicating intellectual property ownership and content ownership. Having copyright means that one is the original owner or inventor of the work at hand. Original content ownership via the copyright is protected by copyright law. Copyright infringement is when someone else other than the owner decides to use protected works (by the copyright) without legal permission from the original owner. Copyright infringement is a cybercrime that has been going on for a very long time, especially with the evolving forms of content sharing whereby one can use already established and protected work for one individual benefit. In the past, copyright infringement was a difficult cybercrime as most copyright-protected works were selling offline. Nowadays, the issue has been dealt with, but humans will always come up with new ways to break the law. The abuse of intellectual property and content by persons other than the original owner is a crime that has affected the online society, as demonstrated by the copyright infringement cases before and after the wide spread and availability of the internet.

I.I Background Information

Copyright infringement is a crime that has been going on offline over the years with no solution even after taking several preventive measures. Most people thought that the problem would stop after introducing internet platforms, but to their surprise, this crime elevated even to higher, more difficult levels (Ahmad & Ghosh, 2011). In ancient times copyright infringement was not such a big deal today. In those days, people even used to share materials relevant for marketing or even newspaper articles. This was not a big deal then as not many people used to create content. With time people indulged in content creation and innovation (Ahmad & Ghosh, 2011). This made copyright infringement a huge crime. The media business became more expensive as it paid out well, which attracted copyright infringement.

The coming of the internet was perceived as a solution for copyright infringement, but to the surprise of many, it created more room for copyright infringement as a cyber-crime. People came up with ways to illegally access the intellectual property, make it available offline, and later upload the same content illegally to their platforms to benefit them (Ahmad & Ghosh, 2011). With the increased number of internet users accessing online materials nowadays online, it is difficult to control the vice as it is difficult to track it. The other factor making it difficult to stop copyright infringement is that it takes place in different forms following the type of intellectual property at hand.

I.II Statement of the problem

Intellectual property and content creation started a long time ago to entertain and express oneself. Artists initially before the online era used to sell their property offline. Musicians sold their albums on music stores in taped form. Movies were also sold in movie shops with the authority of the movie production company. Writers sold their articles in magazines, and some sold theirs to the newspaper companies to be incorporated in the newspaper (Astrachan, 2008). The intellectual property and content only sold well for the first few weeks, then the sales dropped. An investigation into the matter revealed that original sales were high during the first few weeks because only the original copyrighted tapes were circulating in the market, but as time went by, the sales dropped because more copied tapes were circulating and at a relatively low cost. This copyright infringement issue grew bigger to a point where artists pleaded with buyers to avoid pirated items (Astrachan, 2008). This wasn't enough to stop the crime. The internet then came with the advantage of selling content online. Artists opted for the online criteria, and it worked out before people invented other ways of pirating the content online. Over the years, this property has been made popular with people referring to the internet for certain articles, music, or films without minding whether the uploader was the original creator or not. For example, a song can be uploaded on YouTube by a specific artist who is the original owner, but after a few days, you find that the song has multiple uploaders who use the song to gain views. This is all that copyright infringement entails. It's more of content theft.

I.III Purpose of the study

Copyright infringement is a problem that has been ongoing for many years whereby artists are the biggest losers in this game. The purpose of the study is to identify the ways and forms in which copyright infringement occurs and how to block the means through which the infringement occurs. Copyright infringement is a cybersecurity threat whereby one may copy another person's work and post it or use it online for their own benefit. This becomes a cybercrime, especially when used online or if the abused content was gotten online. The loss goes to the original owner who receives nothing from his/her work, and yet the piece of work is earning revenue to another person who did nothing but stole the content. This study will help to curb such cases and instill the law of nature whereby one has to benefit from their own sweat and also to abide by the saying that states, hard work never goes unrewarded. Curbing this issue will help boost the esteem of content creators and also the new underdogs developing their intellectual property and content, thus, creating more content and enjoying the fruits of their labor.

I.IV Research question

The primary question guiding the study include:

- What are the forms of online copyright infringement, and how does it take place?
- How does online copyright infringement vary with internet availability and diverseness over the years?

I.V Objectives of the study

The objectives of the study are:

To explain the various ways in which online copyright infringement takes place.

- To explain how copyright infringement falls under cybersecurity.

- To compare the rates of online copyright infringement over the years in conjunction with the diverseness and availability of internet connectivity.

II. LITERATURE REVIEW

II.I Introduction

The main idea is to uncover how copyright infringement as cybersecurity takes place and in what ways. Copyright infringement and its effects will be stated. After identification of the cybersecurity threat, the infringement ways are discussed in deep lengths and how they occur. The discussion goes further to cover the means or ways to curb the crime. Data representations of the crime rate before deep measures are implemented are taken and after implementation are also taken.

II.II Forms of online copyright infringement

For a long period, the media industry only meant newspapers, radio, and television. This has changed over the years, with more companies adopting the internet as part of them. It is on the internet where most consumers of media content are found (Bohannan, 2010). In this era, most media companies have a department that deals with online marketing and uploading the company's content and client's advertisement on the internet (Bohannan, 2010). This feature has earned huge profits for a company, but it has still opened the doors for internet criminals to steal the content. Cybercriminals are not only the individuals these companies uploading the content need to worry about; there are also lawsuits of several forms against these media companies. Most media law firms worldwide worry more about copyright infringement as it is the most common issue. It was easy to curb copyright infringement in traditional media, but that's not the case in online marketing (Bohannan, 2010). It is not surprising to find your company in a copyright infringement dispute on online platforms. Regardless of the content being original to the company, another company or person in the same field may claim ownership of the context. Some of the forms in which infringement occurs are in the form of plagiarized market copies, newspaper infringement, photography infringement, uploading a film or movie online without the consent of the copyright owner, sharing downloaded songs, videos and games without copyright permission, using logos without copyright permission and plagiarized personal literature.

II.II.I Plagiarized personal literature

Literature in the past, when the internet was not available, was manually encrypted into books and magazines. The books are sold manually and offline, thus making it easy to steal already written articles (Carpenter, 2012). It was easy to still articles and inset them to your book or article then sell it on a different distant part of the world. This was a blow to a writer as many received less from their literature as those who stole the literature sold it at a relatively lower price. Then came the internet, with which articles and books are now uploaded online, making it easier to access the materials (Carpenter, 2012). According to them, the war against this theft pushed the writer to upload content online where it is much safer. Theft of articles, popularly known as plagiarism, continued. People stole articles online, pasted them offline into books, and sold them. The theft of content became easy.

An anti-plagiarism motion was established to curb this menace. Several internet sites and platforms like Grammarly made it easy to know whether an article is original or copied. Thanks to the anti-plagiarism law, one can cite an article whenever one uses it for research purposes. The law is also extended to offline works where it is illegal to use an article that is plagiarized for personal benefit or without the owner's consent (Carpenter, 2012). Whenever one uses articles, essays, poetry, or even a section of a book, it is required by law for one to quote the source or cite it. Although one may cite an article, it doesn't mean it is the end of 'haunting.' The original owner of the content might demand a share of earnings gotten from the sale of your work. To avoid all this pressure, one is advised to protect the law on a retainer basis. This allows someone to pass through a lawyer to clear the path before using such material for personal use.

II.II.II Photography infringement.

It is funny how people have normalized using a picture from random sources for their works and benefit. Most people do not know that these pictures are the original intellectual property of other persons ("Copyright. Infringement of Copyright on Motion Picture. Unauthorized Exhibition", 1931). In the past, pictures were not a big deal as people only considered pictures as random memories. Even the original owners of the picture never thought deep of a picture's value. People never understood that a picture was valued following its age. The older the picture, the higher the price ("Copyright. Infringement of Copyright on Motion Picture. Unauthorized Exhibition", 1931). The old pictures mostly relating to huge historical facts are the most expensive. Before the online error, such pictures were stored in libraries or museums, but their use outside these facilities, though prohibited, was not taken into much consideration ("Copyright. Infringement of Copyright on Motion Picture. Unauthorized Exhibition", 1931). People took advantage of this fact and used the picture in their books and articles with others, even not quoting the picture's courtesy.

The online era came with a lot of advantages at hand. Most of the historical pictures were uploaded online by the beholders and eventually copyrighted. This made it possible to track the use of pictures without authorization. With most articles and books selling and circulating online, it is advised to copyright a picture before uploading it ("Copyright. Infringement of Copyright on Motion Picture. Unauthorized Exhibition", 1931). In the case where one is not the owner of the picture, one is advised to ask the owners from the site where the picture came from for permission before using it to avoid future legal issues. Although it may be difficult to copyright a picture in recent times as most pictures are uploaded for fun purposes, it is advisable to protect a picture as it may be used for purposes that may upset you or unintended purposes like the creation of memes.

II.II.III Newspaper infringement

Newspapers in the past were not copyright protected as people didn't consider articles as important enough to be protected. One could get a situation in which newspapers shared articles. Writers could use other writer's articles in their writing as there was little legal resource. The only pay one got from an article was through the newspaper company. Nevertheless, most people underestimated the value of written work. Written work was to pass messages and not a source of income. As time passed by, people realized the value of the written text, and so came the copyright protection factor. Writers started protecting their articles regardless of whether they were to be used in a newspaper or not. This was during the offline era. People still used written articles illegally without being traced.

Then came the online era, where even newspapers are now available online. Writers nowadays protect their works even if they are still under a newspaper company. The newspaper companies nowadays pay writers extra money for the use of their articles in their papers. The protection of articles has churned writers to ensure whatever articles they provide under their names are originally theirs. The use of another writer's article illegally could cause huge legal penalties. Whenever one wants to attach a written article from a newspaper, one ought to consult the newspaper for legal permission. Disclosing the information source is not mandatory; it is advisable to attach that information somewhere in your works to avoid future legal issues. Written articles cannot be the same in different newspapers. The articles might have similarities in terms of the messages, but the writing is what comes into consideration when plagiarism comes into place.

II.II.IV Plagiarized marketing copies

When one sees an interesting advert on advertising material, one is attracted to the advert and even prompted to purchase the item. What most people don't know is that the advert is not that company's property though it advertises the company. Adverts are forms of intellectual property owned by the advert creator (Cronin, 2002). What people don't know is that most of these adverts are usually copyright protected and can lead to legal action once used illegally. In the past, most companies used to copy other marketing content to market them themselves. In other words, plagiarism of marketing content and adverts was common amongst companies in the past. You would find the same format of a billboard or advert in a newspaper but advertising different companies at different instances (Cronin, 2002). This became boring and yet so common to buyers, and the content creators never benefitted from their works as they never considered copyright protecting such materials.

With time the internet age came along with the advantage of online marketing. This has made it possible for anyone willing to open an online business to establish their business and market them online (""Warez" the Copyright Violation? Digital Copyright Infringement: Legal Loopholes and Decentralization", 2008). The creation of online marketing content is easier than offline content. The ease has generated more and more appetite to create online materials even through illegal means. The copyright factor on this content came to limit such occurrences (Cronin, 2002). Online advertisers are advised to copyright protect their content to avoid marketing content plagiarism. This makes it possible for one to be penalized for stealing another person's content or in the case where one's content is similar to that of another marketing site. Even though such measures have been put in place, it is difficult to stop this plagiarism as nowadays adverts are incorporated within applications, and it is difficult to track each and every advert to check for plagiarism.

II.II.V Uploading a film or movie online without the consent of the copyright owner

People are prone and addicted to entertainment. One of the major entertainment forms is watching a movie or a film. People like to be taken to a fictional world or imaginary world to escape the real world and relax their thoughts (Fagundes, 2012). Thanks to movies and films,

this is made possible. Did you know these movies are copyright protected, and it is illegal to showcase or upload a movie without permission? Most movies and films are usually copyright protected, and it requires authority from the creators to upload them or showcase them, whether on television or in cinemas. In the past, movies were showcased only on televisions and cinemas. The rest were sold in movie stores (Fagundes, 2012). The funny thing about movies then was that the movie sold out well during the first few weeks, but then the sales dropped, but the movie was still amongst the trending movies. It was later discovered that people bought the original movies, which were expensive, and then produced copies of the movie without permission and then sold the movies at a relatively lower price. This, in other words, was piracy. Piracy became a huge problem that exceeded the capability of the authorities.

The internet came about with a slight solution to the problem as it provided platforms in which movies were to be uploaded. These online movies are copyright protected, and thus they showcase on legally allowed platforms only (Fagundes, 2012). Even though the movies are limited only to legalized platforms, humans will always find ways to steal the content and benefit themselves. Online movies are made only available online with no download option, but this was countered by the establishment of cites that illegally allow the download of these movies for offline availability (Fagundes, 2012). These movies are then uploaded to individual platforms illegally. This is the latest form of piracy. In most cases, it is difficult to track such cases as one finds a movie with multiple uploaders, and it is difficult to track the uploaders.

II.II.VI Download and share downloaded songs, videos, and games without copyright permission.

Music is a part of life that humans have normalized to a point where life without music would become boring beyond imagination. Music in the past was performed live and peopled paid to watch the performance (Goldman, 2004). With time, people discovered recording the music to listen to later. The music records started selling in music stores and featuring radio and television. This was when the internet was not available. With time people discovered the wealth behind selling records, and just like movies, piracy came along. People pirated albums and tapes then selling them at relatively lower prices than the original prices (Goldman, 2004). This became a problem as the sale of these tapes was offline and was difficult to track.

The internet brought the advantage of uploading music online and making it only available online (Goldman, 2004). This was an added advantage to artists as online music paid out well. It came to a point where music was only available online, and one needed an internet connection to listen to it. The creation of cites and platforms that enabled the download of music to listen offline came to solve the internet availability issues (Lim, 2020). These platforms enable people to listen to the music offline but limit the consumer to listening only and not sharing. Human beings always find a way out of every

situation, inhibiting them from certain privileges (Lim, 2020). Human beings came with means to share music offline while the only sharing enabled for music was only the link to the track. Did you know that downloading and sharing music without the consent of the owner is a crime? Most people nowadays share music online through social media and other sharing platforms. This is a crime yet to be solved. People have normalized this crime, yet those suffering are the artists. It is difficult to track such a crime as multiple people share multiple songs to multiple destinations on a daily basis.

III. METHODOLOGY

III.I Introduction

The study aims to create a strong argument to define the effects of online copyright infringement as a cybersecurity threat to society. The study also aims to produce data representation of copyright infringement rates over the years with the diverseness and availability of internet connectivity. The methods used to gather the data and the procedure followed will be explained in the topic.

III.II Hypothesis

H1: Online copyright infringement is a crime that has negatively affected society over the years with multiple internet diverseness and availability.

H2: The most affected audiences include the artists and content creators.

III.III Sample population

The study shall revolve around content creators who make their intellectual property available online while under copyright protection. These include writers, musicians, movie producers, and photographers.

III.IV Data collection procedure

This study's data collection is based on online copyright infringement cases over the years. The study will rely on online tools such as Google to determine the cases over the years. The study will also use questionnaires to get the opinion of intellectual property owners on online copyright infringement cases over the years. The questionnaires shall be submitted online through platforms such as emails, WhatsApp, and WeChat; the response will be through the same media.

IV. RESULTS AND DATA ANALYSIS

IV.I Introduction

The results and data analysis chapter shall give the study results with indications of data concerning the year. The results will be recorded with the year as reported online, respectively. The data shall be tested for validity. The study's topic will be the rates of online copyright infringement over the years in conjunction with internet availability. The cases are expected to rise from previous topics over the years as internet availability became more available.

IV.II The number of online copyright infringement cases

IV.II.I Data presentation

The cases represent the online copyright infringement cases, while time is represented in years. The number of online copyright infringement cases rose as the years went by. This data was recorded from the USA as a country alone. The data is represented in two phases; before and after the wide spread of the internet. This is represented as follows below

IV.III Copyright infringement cases before the wide spread of the internet

Years	Cases (%)
2002	2
2003	2
2004	2
2005	3
2006	3
2007	3
2008	3
2009	4
2010	5

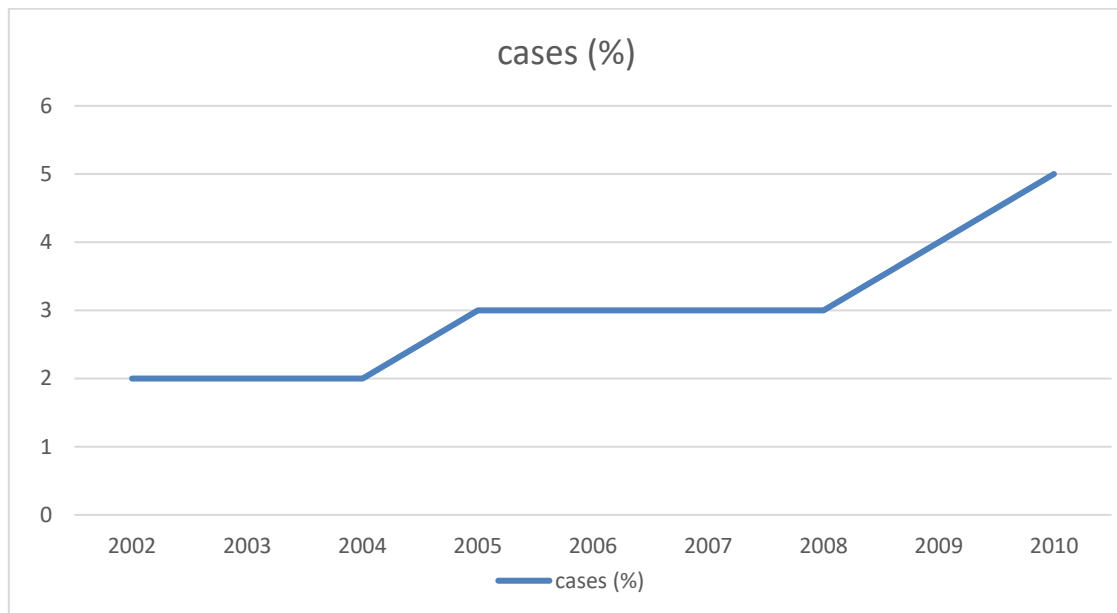Table IV.I: table showing cases against time in years before wide internet spread

Figure IV.I: Graph showing cases before the wide spread of internet against time in years

IV.IV Copyright infringement cases after the wide spread of the internet

Year	Cases in percentage (%)
2012	15
2013	17
2014	20
2015	24
2016	30
2017	36
2018	44
2019	47
2020	48

Table IV.II: Table showing the percentage of copyright infringement against time in years
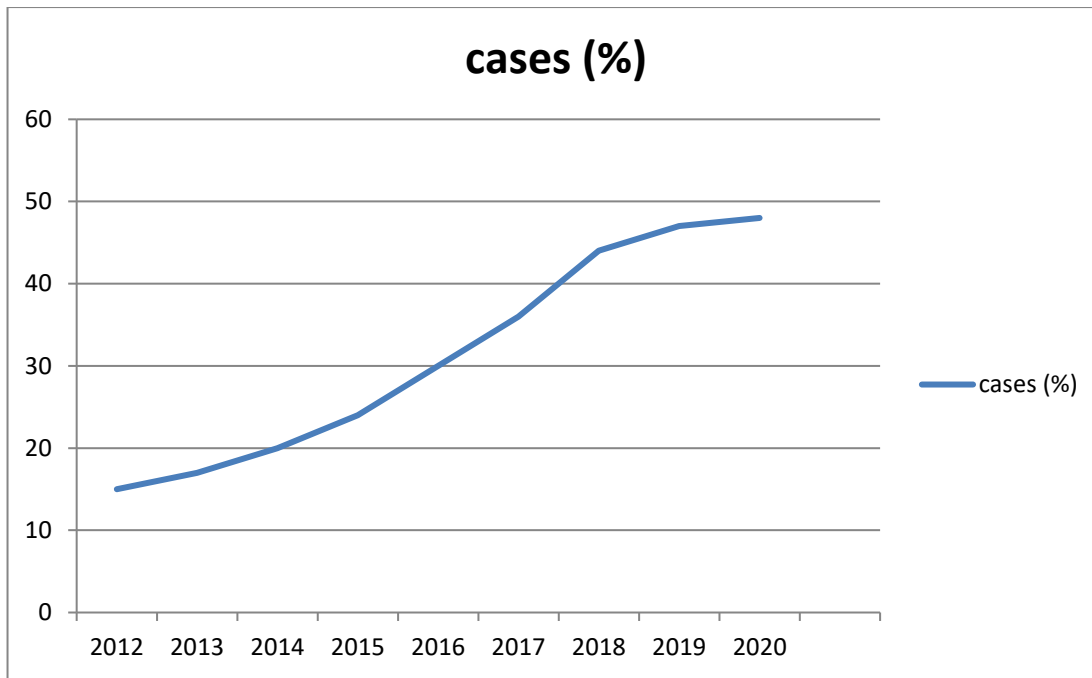
cases (%)

Figure IV.II: Graph showing the percentage of copyright infringement against time in years.

IV.V Data presentation analysis

The cases of online copyright infringement rose over the years, with cases increasing yearly. This happened even before the internet became available. The rates increased with the spread of the internet. More people became aware of the internet and hence explored their options in the field of copyright infringement This was due to factors like the availability of loopholes on the internet, which allowed the use of the illegal property for personal

benefit, and the loop that allows people to access the materials illegally. The rates were boosted more because internet availability and speeds were improved over the years. This indicates a great negative impact on the original owners of the intellectual property, whereby they get less income than they deserve. This data indicates that no remedy to this crime is yet to be found. It also indicates that the vice increases at an increasing rate.

V. DISCUSSION AND CONCLUSION

V.I Discussion

Copyright infringement becomes a cybersecurity threat once the intellectual property is made online and accessible to masses that use the internet. Before the internet was wide spread the rates of copyright infringement were low. As the availability of internet expanded, the rates of copyright infringement also rose. Online copyright infringement is a crime that people do not take on seriously as it should be; thus, it has grown over the years, and it seems not to be coming to an end anytime soon (Park, 2020). This vice is made possible by the availability of internet and internet loops. This vice takes place in many forms as it entails the breach of any property under copyright protection. The crime is boosted because it

is not easy to track every case of copyright infringement as it occurs in online platforms, which have expanded

over the years. Copyright infringement is a vice only the content creators can relate to (Park, 2020). Those stealing the content of others can never understand the vice's pain as they perceive that the creator has already done away with the property (Saikia, 2010). The vice is wide to the point even having intellectual property from others offline illegally is a continuation of the crime. Several platforms have tried to close the loops that cyber thieves use to have this property. Some have been successful so far, with others failing miserably due to the development of sites and platforms that support illegal work.

V.II Conclusion

People should take this crime seriously and try to avoid the crime as much as possible to support their fellow brothers and sisters in the creative media industry. The crime is enable with the availability of the internet in most places on the earth. The infringement of copyrights is as serious as stealing from a store, shopping mall, or shop around you. The difference comes in where the internet has made it possible for internet thieves to steal intellectual property and get away with it without being noticed. For the unfortunate ones who get caught in the process, serious legal actions are taken against them, including being fined and compensating the original owner and even facing jail terms. Suppose this vice continues with the increasing rate without solutions to solve it. In that case, a time will come when people will do away with content creation with the fear of earning nothing from it as it will be stolen and used to benefit another individual. The stopping of this vice

begins with individual persons disciplining themselves and obeying the copyright law.

V.III Recommendations

1. There should be the establishment of internet cops to monitor any copyright infringement activities.

2. The copyright law should be expanded such that copyright infringement would be a very serious crime worth heavy consequences.

3. The platforms in which the intellectual property is being uploaded should be secured and protected such that it would be difficult to obtain anything illegally from these platforms.

VI.   REFERENCES

[1] Ahmad, T., & Ghosh, I. (2011). Plagiarism and Copyright Infringement. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1839353

[2] Astrachan, J. (2008). De Minimus Copyright Infringement. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1625037

[3] Bohannan, C. (2010). Copyright Infringement and Harmless Speech. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1367624

[4] Carpenter, C. (2012). Copyright Infringement and the Second Generation of Social Media Websites: Why Pinterest Users Should Be Protected from Copyright Infringement by the Fair Use Defense. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2131483

[5] Copyright. Infringement of Copyright on Motion Picture. Unauthorized Exhibition. (1931), *31*(7), 1187. https://doi.org/10.2307/1115347

[6] Cronin, C. (2002). Music Copyright Infringement Online Archive. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.306982

[7] Fagundes, D. (2012). Efficient Copyright Infringement. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2132918

[8] Goldman, E. (2004). Warez Trading and Criminal Copyright Infringement. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.487163

[9] Lim, W. (2020). A review on the copyright infringement types and standard for infringement decision. *Korea Copyright Commission*, *33*(3), 111-150. https://doi.org/10.30582/kdps.2020.33.3.111

[10] Saikia, N. (2010). Hyperlinks and Copyright Infringement. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1566724

[11] "Warez" the Copyright Violation? Digital Copyright Infringement: Legal Loopholes and Decentralization. (2008), *52*(6), 10-12. https://doi.org/10.1007/s11528-008-0207-0