SAFEGUARDING MOBILE APPS: COPYRIGHT INFRINGEMENT OF MOBILE APPS AND THEIR COPYRIGHT PROTECTION LAWS IN THE US AND INDIA

Sanjana R

5th year law student

SASTRA Deemed University

ABSTRACT:

The mobile apps are referred to as the complex multimedia product or application which consists of compilation or combination of various elements of software code, text, images, and sounds. It is an essential requirement for the start-up economy and acquires meaning in its interaction with various types of content as well as enhancing its features or quality of the new product or service. They have become the essential and significant contributor to the global GDP level. The various components present in a mobile app are: software code, the graphical user interface, the creative content, databases, API (application programming interface), functionalities and background infrastructure.

This research paper analyses the various intellectual property law issues in the field of development of mobile apps but the primary focus will be shown in the field of copyright infringement and their respective copyright laws of US and India regarding mobile apps. The paper also scrutinizes the various legal protection implemented in US and India in order to curb the copyright infringement issues as well as other intellectual property rights issues. The novelty of this research paper is that we have made a comparative analysis on the effectiveness of the copyright laws in USA and India

in ensuring the curbing of copyright infringement in mobile apps and it also provides an overview on the legal protection given under various intellectual property laws for safeguarding the development of mobile apps. The research study is doctrinal as well as comparative in nature. The research study has gathered its information and data from the secondary sources.

KEYWORDS: mobile apps, copyright infringement, the US copyright of 1976, digital millennium copyright act of 1998 and Indian copyright act of 1957

INTRODUCTION:

The mobile apps plays a significant role in our daily lives which provides various services such as social networking, finance, fitness, health care, cosmetics, music, entertainment, etc. The mobile apps are referred to as the complex multimedia product or application which consists of compilation or combination of various elements of software code, text, images, and sounds. The various components present in a mobile app are: software code, the graphical user interface, the creative content, databases, API (application programming interface), functionalities and background infrastructure.

The intellectual rights of the app developers were given legal protection under the intellectual property laws of patents, trademarks and copyright with regard to protection of various aspects of the mobile app development.The novel and non-obvious aspects of the mobile app can be protected under the patents act. The patents act confers an exclusive right on the owner for 20 years for his/her invention for which she had claimed for a patent. The branding, logo as well as the name of the app can be protected under the trademarks act. The trademarks act will identify the goods or services of the individual or enterprises in order to distinguish their goods or service from that of others. The mobile app's source code, user interface and other creative elements will be protected under the copyright act. The copyright act confers the owner with exclusive right to reproduce and distribute copies, prepare derivative works as well as performer display the work publicly.

BACKGROUND OF THE STUDY:

The mobile app industry has undergone a tremendous growth rate over the past few years by facilitating various services to the consumers. With the development of mobile apps across the world, there comes the major concern of copyright infringement which violates the intellectual property rights of the developer and it makes the developer to suffer financial loss and reputational damages. Therefore the copyright law plays a significant role in safeguarding the exclusive rights of the copyright holder (i.e.) the developers of the mobile apps and also secures their economic benefits. Though, the main aim of these copyright laws is to protect the software developers' rights but still there maybe differences in their legal framework, enforcement mechanism which may create challenges in effective restraining of copyright infringement. This background highlights the significance in understanding the copyright protection laws of

United States and India in safeguarding mobile apps as well as their effectiveness in curbing the copyright infringement in mobile apps.

LITERATURE REVIEW:

Johnson, R., Kiourtis, N., Stavrou, A., & Sritapan, V. (2015, May): This paper discusses about the extent to which these copyright infringement in the content of a mobile application creates an impact in multiple platforms in a mobile markets.

Gubby, H., & Klaus, J. (2020): This paper discusses about the various kinds of protection provided for the app developers under various IP laws in the European union countries.

Menell, P. S. (1988): It deals with the legal framework of copyright protection of application programs and it also provides the guidelines regarding the usage and copyright infringement in application programs.

Kahandawaarachchi, T. (2007): This is a comparative study of the US and India on determination of the liability of the internet service providers for their role in the infringement of copyrighted contents to the third party and it also states the effectiveness of US and Indian laws in curbing them.

Naik, S. R., & Naik, S. R. (2023: This paper provides an overview on the intellectual property rights with regard to the open source software as well as the Indian legal framework for the curbing of piracy of open source software and their associated risks.

Chauhan, M. (2023: This paper analyses the legal protection provided under the Indian copyright act and patents act with regard to development of computer software and it also compares the effectiveness of both the copyright and patents law pertaining to the computer software protection.

Mac Síthigh, D. (2013): This highlights the regulating the smartphone app stores as well as protection of the consumers privacy.

Hartiens, S. (2020): This paper analyse the historical background of API and their associated legal challenges and has also emphasised on Supreme court decisions.

Mrša, L. (2021): It examines the effectiveness of the copyright laws with regard to the protection of app customized fashion dresses by making a comparison to copyrights laws of EU and US and it also provides a overview on the protection of app customized fashion designs under the other intellectual property laws such as trademarks, design patents etc.

RESEARCH PROBLEM:

Due to the rapid expansion and advancement of technology, the copyright infringement is major concern for the developers of mobile apps in order to safeguard their copyright in mobile apps as well as other related intellectual property rights. United states as well as India have their own copyright laws to protect the software developers rights but still the differences in legal framework, technological adaptability and their different enforcement mechanisms creates challenges in removing the copyright infringement in mobile apps.

This research problem aims to compare the copyright protection laws of US and India which are related to mobile apps as well as to examine the extent to which these copyright protection laws are effective in curbing the copyright infringement in mobile apps.

RESEARCH OBJECTIVES:

1. To compare and analyse the effectiveness of the copyright laws of US and India pertaining to protection of mobile apps.
2. To analyse the impact of copyright infringement in the development of mobile apps in the US and India.

RESEARCH QUESTION:

1. Whether the copyright laws of US are more effective than Indian copyright laws in case of copyright infringement of mobile apps?
2. Whether the copyright infringement affects the development of mobile apps?

SCOPE AND LIMITATION:

This research paper focuses on the copyright protection laws of US and India in safeguarding the development of mobile apps as well as it analyses the effectiveness of those copyright protection laws in curbing the copyright infringement. This paper also provides an overview on the intellectual property laws pertaining to protection of mobile apps. This paper only deals within detail the copyrights law relating to mobile apps and not other forms of intellectual property laws. This study is focuses on the jurisdiction of US and India only, and does not include other countries' copyright protection laws.

RESEARCH METHODOLOGY:

This study follows the doctrinal research methodology that is predominantly conceptual and literature based. It examined various research papers, legislations, books, and newspaper articles. The legal frameworks analysed were the information technology act 2000, Indian copyright act, digital millennium copyright act, US copyright act.

RESEARCH METHOD:

This research paper has adopted the doctrinal and comparative study method. This paper focuses on the systematic analysis and interpretation of various statutes, legal principles, judicial precedents, and scholarly commentaries. Our research analysis relies on secondary data sources. This paper has examined various legislations and judicial decisions to interpret how the US and Indian legislations have provided protection for copyright infringement in case of mobile apps as well as to compare the effectiveness of both the countries' copyright legislations.

OVERVIEW OF INTELLECTUAL PROPERTY LAWS IN MOBILE APPS:

The mobile applications is an application of software which are mainly designed to be used or run in mobile devices and these apps are sold in multiple platform stores which can be downloaded freely or by paying the charges required for its installation. Due to the rapid growth rate in the usage of the mobile apps by numerous users across the world it becomes essential for the app develops or its creators to protect their apps in order to prevent the mobile apps from getting infringed or other associated risks. The novel and non- obvious aspects of the mobile app can be protected under the patents act. The patents act confers an exclusive right on the owner for 20 years for his/her invention for which she had claimed for a patent. The branding, logo as well as the name of the app can be protected under the trademarks act. The trademarks act will identify the goods or services of the individual or enterprises in order to distinguish their goods or service from that of others. The mobile app's source code, user interface and other creative elements will be protected under the copyright act. The copyright act confers the owner with exclusive right to reproduce and distribute copies, prepare derivative works as well as performer display the work publicly.

COPYRIGHTS FOR MOBILE APPS:

The mobile apps source code, user interface and other creative elements are protected under the Indian copyright act 1957 and in US under the copyright act of 1976 and the digital millennium copyright act 1998. Hence the copyrights act have a significant role in the protection of mobile apps as they are software applications which are designed to be run on mobile devices and each mobile app will be having its own unique source code. A source code refers to the set of human readable instructions written in order to make the computer or the mobile application to function properly. Once the mobile app is fixed in the tangible form then the copyright protection will be automatically attracted but in order to get statutory protection then it must be registered in order to deter the copyright infringement of mobile apps and also to prevent the app developers from suffering losses.

The app developers will be given the exclusive right to reproduce, distribute, display and modify their software after the grant of copyright for their mobile app. The app developers can enhance their market value by proving that their copyrighted apps are original, unique and are legally protected. Once the app developer has registered his/her mobile apps for copyrights then in case of copyright infringement the app developers can seek damages and injunctions by taking a legal action in the court of law. The extent to which this copyright protection will be provided varies as per the software (i.e.) if the app developer creates software which involves a third party or open source software then such third party and open source software will be excluded from copyright protection. The developed software which has been registered for copyright must also comply with the terms of their license for the purpose of the usage of the software.

US LEGAL FRAMEWORK FOR COPYRIGHT PROTECTION OF MOBILE APPS:

The copyright act of 1976 provides protection of copyright of mobile apps in the United States and the literal (source and object code) and non- literal (structure, sequence and user interface) elements of the mobile apps are governed under the copyrights act 1976. As per the copyright protection under United States law, the various copyrightable elements are namely the source and object code of the mobile app, their user interface, the multimedia content as well as the written content of the mobile apps. The general ideas and functionalities of a mobile app cannot be copyrighted.

The key provisions under the U.S. copyright act of 1976 are:

[1]Section 102 states the general subject matter of copyright

[2]Section 106 states the exclusive rights conferred in a copyrighted works

---

[1] Section 102 of the US copyright act of 1976, Title 17 U.S.C

[3]Section 117 states the limitations on exclusive rights of computer program

Remedies for copyright infringement:

In case of copyright infringement in mobile apps, the copyright holder can avail for civil remedies or criminal remedies. The civil remedies consist of injunctions, damages and account of profit whereas the criminal remedies consist of imprisonment, payment of fines and seizure and forfeiture of infringed copies of the copyrighted materials.

[4]DIGITAL MILLENNIUM COPYRIGHT ACT OF 1988:

It is one of the most important pieces of legislation of copyright law which aims to update the laws of copyright protection in order to keep up with the advancement in the field of technology as well as the digital media. Its prime goal is to prevent the copyrighted digital content from unauthorized reproduction, distribution and modification which also includes the issues of digital rights management and liability of the internet service providers. It consists of legal framework for the online service providers, online content creators and protection of intellectual property rights.

The key provisions of the act contains anti- circumvention measures, safe harbour for internet service providers and formal notice and takedown processes as well as the limitations on liability for non- profit institutions. The anti circumvention measures refer to the restriction to bypass encryption and other security features which have been designed in order to protect the copyrighted works from unauthorized access. The safe harbour provisions facilitate protection to the internet service providers from not being held liable for the infringing acts of their users while complying by the conditions made. The notice and takedown procedure is a process which makes the copyright holder to send a notice of request to remove the infringing contents from the online medium and if the holder didn't file a law suit within 10-14 days then they can restore the content to the online platform.

The DMCA plays the major role in managing and protecting the content posted in the online platform and it has strengthened the digital copyright protection and also it acts as a shield(safe harbour provision) to protect online service providers from the direct liability for theirs user generated content in the online platform.

---

[2] Section 106 of the US copyright act of 1976, Title 17 U.S.C
[3] Section 117 of the US copyright act of 1976, Title 17 U.S.C
[4] The Digital millennium copyright act of 1998

Registration of copyright for mobile apps:

The copyright protection for mobile app is automatic upon creation as per the US copyright protection law. The app developer has to apply for registration with the US Copyright office in order to get their mobile app to granted copyright. Once it has been registered for copyright then it stands as legal evidence for ownership over the mobile app as well as it makes it eligible for statutory damages and attorneys' fees. It can also make the copyright holder to file a lawsuit in case of copyright infringement of mobile apps.

The fair use defence has been given to reverse engineering but it must not involve any unauthorized reproduction of protected code and the fair use defence is applied for the purpose of research, education and non- commercial research purposes.

INDIAN LEGAL FRAMEWORK FOR COPYRIGHT PROTECTION OF MOBILE APPS:

Under the Indian copyright act of 1957, it has been stated that the copyright subsists in the original literary, dramatic, musical and artistic works, cinematograph films and sound recordings. The source code in mobile apps which is a part of the software can be considered as a literary work and hence it is copyrightable.

The copyright act was amended in the year of 2012 with the inclusion of the concept of digital rights management and technological protection measures which has been made enforceable in order to prevent them from unauthorized digital content copyright infringement and also provide penalties for circumvention of digital rights management.

Under the Indian copyright act 1957, software is defined as follows:

[5]Section 2(ffc) of the Copyright Act defines 'Computer program' as a set of instructions expressed in words, codes, schemes or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieve a particular result.

[6]Section 2 (o) of the Copyright Act defines "literary work" and includes computer programs, tables and compilations including computer databases.

---

[5] Section 2(ffc) of the copyright act of 1957
[6] Section 2(o) of the copyright act of 1957

The copyright act covers the source code, object code, and overall structure of the mobile apps which forms the aspects of software. As per the copyright law the ideas are not protected which means that only the specific code of the app created by the app developer is protected and not the methods or processes mentioned in the code. Also it doesn't protect the functional aspects of software which makes app developer to create software which can perform similar function but the source code must not be the same.

The essential requirements for the copyright protection of mobile apps are:

1. It must be an original work
2. Program which creates only algorithms and tables not eligible for copyright protection of software
3. It must published first in India

Registration procedure:

The application for the copyright registration for mobile app must be submitted and it is compulsory to provide the source code and must be confidential about the source code and the authorities may object to it and then it will be published to the public for 30days if no one opposes then the application will be examined, if there are no discrepancies then the final step will be approval from the registrar and once its accepted the app developer will get an notification from the authorities.

Remedies for copyright infringement:

In case of copyright infringement in mobile apps, the copyright holder can avail for civil remdies or criminal remedies. The civil remedies consist of injunctions, damages and account of profit whereas the criminal remedies consist of imprisonment, payment of fines and seizure of infringed copies of the copyrighted materials.

The concept of fair dealing can be taken as a defence only when copyrighted work is used for non-commercial purposes but it can be used for research and education purposes.

COPYRIGHT INFRINGEMENT IN MOBILE APPS:
As per the US copyright act, the copyright infringement of the mobile app occurs when the mobile apps' source code has been without authorization has been reproduced. Though the mobile apps have distinctive functionalities, structures but still the non- literal elements of the software has been similar then it may lead to copyright infringement. Once the copyrighted apps' copies has been pirated or distributed without authorization from the copyright holder amounts to

infringement. Even the creation of the clone apps also amounts to infringement. The US courts uses the test of substantial similarity to determine the copyright infringement.

The United States Supreme Court in the case of Google LLC Vs Oracle America (2021)[7] was a legal war between the Google and oracle with regard to the Google's use of oracles' java programming language in android was fair use. In this case, oracle is the copyright holder for the Java SE but Google copied 11500 lines of code from Java SE in their own program for Android. It was held by the court in favour of Google that the use of code constitutes fair use of the copyrighted source code.

In India, as per the copyright act of 1957, [8]section 51 defines what constitutes an infringement

For mobile apps,

- o Unauthorized reproduction or distribution of the app's code or design.

- o Unauthorized public display or distribution of the app through platforms or app stores.

- o Creation of derivative works based on the app, such as creating a "clone" app that replicates essential features or look-and-feel.

Types of infringement relevant to mobile apps;

Direct infringement consists of the copying of source code, cloning functionalities of the app and copying of the user interface.

Indirect infringement happens when a third party distributors, or intermediaries helps in the process of distribution of pirated or unauthorized versions of the app such as hosting of unauthorized usage or access of the mobile app.

[9] Section 63 – states the criminal liability for copyright infringement includes from 6months upto 3 years of imprisonment and fine of fifty thousand rupees which may extend to two lakh rupees.

---

[7] Google LLC v. Oracle Am., Inc. 141 S. Ct. 1163 (2021)
[8] Section 51 of the copyright act of 1957

In the Indian case of Microsoft corporation Vs Prithviraj[10], it was contended by the plaintiff that defendant has committed copyright infringement by selling the pirated versions of the plaintiffs' operating system on electronic devices and it was held that the defendant has committed a copyright infringement and so the court granted the permanent injunction decree and a compensation amount to be paid by defendant to the plaintiff.

COMPARATIVE ANALYSIS OF COPYRIGHT LAWS OF US AND INDIA:

The governing legislation for copyright protection in US is the copyright act of 1976 strengthened by the digital millennium copyright act 1998 whereas in India it is copyright act of 1957 amended in 2012.

In US DMCA includes strict anti circumvention measures and prohibition of bypassing of digital rights management whereas in India it consists of limited anti circumvention measures and digital rights management not strongly enforced.

With regard to the concept of fair use / fair dealing, in US it is broad and flexible and its not limited to specific purposes and its purposes can be varied such as criticism, commentary, reports, news, etc. the amount of original work is taken into account and it considers the impact of it in the market whereas in India, the fair dealing is more specific in nature, its purposes can't be varied and doesn't expressly mention about the amount of original work.

In US, the statutory damages are available for the registered copyright mobile apps but it is not specifically available for the registered copyright mobile apps in India.

In US, the duration of copyright is lifetime author + 70years for individual works for corporate works 95 years from publication or 120 years from creation whereas in India, the duration is lifetime of the author+ 60years for individual works; 60 years from publication for corporate works.

In US, DMCA provide clear notice and takedown procedure for removing the infringed content from online platform whereas in India, it lacks streamlined procedures and enforcement mechanism.

In US, DMCA provides safe harbour for the online service provider but in India, for handling intermediary liability the structured system as well as the safe harbour provision is less and limited.

---

[9] Section 63 of the copyright act of 1957

[10] Microsoft corporation vs pritviraj AIR 2015 DELHI 10

FINDINGS AND SUGGESTIONS:

The US copyright protection laws are more effective than the Indian copyright protection laws because US provides a comprehensive copyright protection along with clear protections for non- literal elements as well as includes strong anti-circumvention provisions and India still provides a foundational copyright protection with ambiguity in protection for non-literal elements and lacks strong anti- circumvention provisions. Hence it is suggested to strengthen the anti-circumvention and DRM provisions in the Indian copyright law and also to provide clarity in protection of non-literal elements.

CONCLUSION:

To conclude, it is essential to safeguard the mobile apps against copyright infringement in order to foster innovation, protecting the intellectual rights of the app developers and ensuring the growth of the digital economy. Both the United States and India provide legal framework for the copyright protection of mobile apps. However, the US provides a stronger and more effective copyright protection for the mobile apps as well as offers broader interpretative precedents for digital copyrights than the Indian copyright protection law which is still in the evolving stage to address the digital piracy and copyright infringement in mobile apps. Therefore strengthening the legal framework through clear guidelines on digital copyrights and increasing the enforcement capabilities, we could protect the mobile app developers from copyright infringement of mobile apps in a much better and efficient manner.

BIBLIOGRAPHY/ REFERENCE:

1. https://dunnerlaw.com/cover-your-app-protecting-mobile-applications-through-intellectual-property-law/
2. Johnson, R., Kiourtis, N., Stavrou, A., & Sritapan, V. (2015, May). Analysis of content copyright infringement in mobile application markets. In *2015 APWG Symposium on Electronic Crime Research (eCrime)* (pp. 1-10). IEEE.
3. Gubby, H., & Klaus, J. (2020). Intellectual property and the protection of Apps in the European Union. *European Journal of Law and Technology*, *11*(3).
4. Mac Síthigh, D. (2013). App law within: rights and regulation in the smartphone age. *International Journal of Law and Information Technology*, *21*(2), 154-186.
5. https://www.igexsolutions.com/blog/protecting-a-mobile-app-with-ip-law/ https://www.law.cornell.edu/uscode/text/17
6. https://blog.counselstack.com/ip-and-mobile-apps-app-patents-copyright-protection/ https://www.copyright.gov/title17/
7. https://blog.ipleaders.in/copyright-protection-app-developer/
8. https://www.takelegal.in/mobile-app-laws-in-india/
9. Hartiens, S. (2020). The Battle of Big Tech: Distinguishing Fair Use and Copyright Infringement with APIs. *Florida Coastal Law Review*.
10. https://www.intepat.com/blog/shielding-innovation-understanding-copyright-protection-for-app-developers-and-their-software/
11. Mrša, L. (2021). COPYRIGHT PROTECTION OF FASHION DESIGNS CUSTOMIZED VIA APPS IN THE EU AND THE US.
12. Menell, P. S. (1988). An analysis of the scope of copyright protection for application programs. *Stan. L. Rev.*, *41*, 1045.
13. https://www.yourlegalcareercoach.com/protect-your-startups-mobile-app-in-india-the-legal-superpowers-you-need/
14. Yadav, V. (2022). Copyright Laws: Challenges in the Digital Era. *Issue 3 Indian JL & Legal Rsch.*, *4*, 1.

15. https://depenning.com/blog/protecting-software-innovation-in-india-a-game-of-copyright-patents-and-trade-secrets/
16. https://blog.ipleaders.in/registration-computer-software-copyright-act-2/#Copyright_protection_for_computer_programs
17. https://vakilsearch.com/blog/software-copyright-registration-legalising-your-software/
18. https://www.geeksforgeeks.org/what-is-dmca/
19. https://blog.ipleaders.in/the-digital-millennium-copyright-act-1998/
20. https://bytescare.com/blog/digital-millennium-copyright-act
21. https://blog.ipleaders.in/how-to-register-a-copyright-in-the-usa/#What_is_%E2%80%9Ccopyright%E2%80%9D
22. https://blog.ipleaders.in/key-differences-us-indian-copyright-laws/#USA_v_Indian_Copyright_Law
23. https://bytescare.com/blog/fair-use-copyright-india-vs-us