API COPYRIGHT IN THE SPOTLIGHT: ANALYZING GOOGLE V. ORACLE AND ITS GLOBAL TRADE EFFECTS

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Abstract

In the digital age, the development in technology requires the need for open access to promote innovation. This concept creates the modern perspective of copyright law which represents a more flexible approach. It also forms the need for balancing innovations while still protecting the exclusive rights that derived from the copyright law. The non stop innovation raises the need for clearer guidelines for the computer industry and thus making the policymakers to construct a relevant regulation. However, the copyright act is one of the sets of law that recognized the protection of computer programs, yet the technology that is within the programs such as Application Programming Interfaces (API) copyright status is still disputed. In this regard, this article aimed to examine the copyrightability of an API through the copyright perspective and analyze its position in a landmark case such as Google v. Oracle case. This article further examined through the lens of international trade that have been affected by the constantly improving technology specially in the digital trade initiative of the copyrightability of API and how it has an important role in international trade. By using a normative legal research method and through the idea-expression dichotomy perspective, this article found that the API has a functional element that would make it fall into the category of method of operation that is not protected under TRIPS. This article further finds that the protection of an API may cause a disaster impact on the computer industry since in the case of Google v. Oracle, it would lead to the full control of the Java API usage by Oracle which would create an unbalanced competition between technology companies and would limit the innovation and development of technology.

Keywords: *Copyright Law, Application Programming Interfaces, Google v. Oracle, TRIPS.*

INTRODUCTION

In today's cutting-edge era, we have dived into a new dynamic between law and technologies which have created a significant impact with the needs of new regulation and new sets of law. The need for a new regime of law was seen in the view of the fact that most of our law whether it is international or municipal law were created long before technologies have improved like today. On this occasion, the computer industry have become one of the fast improving industry which requires a clearer guidelines of the intellectual property protection particularly for an Application Programming Interfaces (API) have been a debated for these past few years since the Google Llc v. Oracle America Inc (Google v. Oracle) arises in disputing the copyrightability of an API. Prior to this article, Professor Peter S. Menell through his article, titled "Rise of the API Copyright Dead?: An Updated Epitaph for Copyright Protection of Network and Functional Features of Computer Software" provides a comprehensive view in examining the API copyrightability debate in Google v. Oracle case which later found that there is some element contained in computer software that is copyrightable. In relation to the API, the code implementing the Java API is one of the elements that is protected under copyright. The copyright protection of computer programs has a significant impact in supporting innovations and healthy competition in the software industry.

Intellectual property law is considered to be more open with these technological improvements since most of the regulations accommodate the protection of the inventor's

rights to protect the usage of their product and to prevent the infringement of their intellectual property rights. Intellectual property law has become more flexible with technological advancements, as many regulations now better protect inventors' rights. These updated laws help creators safeguard their products and prevent unauthorized use or infringement. This modern approach not only protects inventors but also encourages innovation by reassuring creators that their work is legally secure. As a result, the legal framework now balances the interests of both creators and the public, creating an environment where technological progress can flourish while respecting the rights of the innovators. Intellectual Property Rights (IPR) refer to the rights arising from human intellectual capabilities, which are related to individual personal rights, including human rights. IPR represents a form of personal property that can be owned and treated in the same manner as other types of property. The primary objective of intellectual property rights is to stimulate innovation and foster the development of creativity within society. This ensures that individuals can innovate and enhance their creative efforts without fear, as their creations and discoveries will be safeguarded under intellectual property rights. Nowadays, the protection of IPR has shifted into a more flexible approach in order to accommodate the need to achieve a public welfare and progressive development in technology that can be accessible to all.

The technology industry requires the open access to information regarding the specification of the technology that has been invented by others. For example, during the launching of Intel USB 3.0 in 2008 there was a dispute between Intel and other tech companies such as AMD and Nvidia that demanded Intel to share the specification of USB 3.0 because they believed that Intel was holding back the information. They also threatened to develop their own USB standard if Intel didn't intend to share the specification. In the end, the dispute was resolved because Intel finally shared and refined the specification of its product that became widely adopted in various devices and PCs. This situation also affected the development of IPR in which the modern copyrights law also covers the sets of limitations and exceptions that enable the free use of protected works. It means that the copyright law recognized the need for a little flexibility in its regime to encourage technological development that can be accessed, used, and developed by everyone.

One has to note the importance of keeping the balance between interest of rights holders and users of protected works, therefore the limitations and exceptions in copyright law plays an important role to keep the balance. It's essential to strike a balance between the interests of rights holders and users of protected works. Overly strict protections can limit access to knowledge and stifle creativity, while too many exceptions can reduce incentives for creators to produce new works. This is why limitations and exceptions in copyright law are so important. They prevent copyright from being too restrictive, allowing fair use in areas like education, research, parody, and criticism. These exceptions promote public access to information and cultural exchange, creating an environment where both creators and users can thrive. Balancing these interests ensures copyright law protects creators' rights while supporting society's need for the free flow of ideas and information. This includes, the limited use of the copyrighted work without having to acquire a permission from the copyrights holder. This action was allowed by the United States Supreme Court in Williams & Wilkins Co. v. United States case back in the 1970s where the the National Institutes of Health and the National Library of Medicine were making unauthorized photocopies of journal articles for medical researchers in which the publishers Williams & Wilkins Co. claiming that the government were infringing on their copyrights by making unauthorized photocopies on their copyrighted works. The Supreme Court then ruled that the reproduction by photocopying the protected works for research purposes constituted "fair use" under copyright law.

The fair use in copyright law has not only covered the copying of a protected works for research purposes but also extended to what had been called “transformative use” as it created new products and expanded the use of copyrighted products which happened in the Google v. Oracle case in 2021. This case started when Oracle sued Google for copyright infringement of its Copyright in view of the fact that Google uses Java application programming interfaces (Java API) which the copyright is owned by Oracle, in the Android system. In this case, the United States Supreme Court ruled that the transformative use conducted by Google through copying Java API and adding something new with further purpose is constituted as a fair use of that material under copyright law. The extension of the fair use doctrine for transformative use based on the Supreme Court ruling in the Google v. Oracle case has led to the development of copyright law in the digital world that some might say is outdated and an impediment to “truth and exploration.” This perspective came from a view that copyright law is often linked to the printing and hard copy world which is far behind the digital world where it is so easy to conduct such infringement using the copy and paste keys.

However, the Supreme Court has neglected the fundamental questions on whether the Java API is entitled to be protected under the copyright law and jump right into how the fair use argument used by Google is in accordance with the fair use four factors governed under the United States Copyright Act of 1976 section 107. In this regard, the issue on whether the API is copyrightable or not is still an ongoing debate. When the Supreme Court has failed to address the API copyright issue, they have succeeded to examine the fair use argument claimed by Google for using Oracle's Java API for its new software product. The fair use doctrine arose from the expansion of copyright law where it has evolved to limit the copyright owner prerogative rights. This expansion happened because of the technological development we are experiencing. In its application, the fair use doctrine would require a case-by-case analysis to see whether the fair use doctrine is applicable or not. The purpose of copying or transforming someone's copyrighted work into a new product is an important factor for one to analyze whether it is for educational purposes or public needs. Therefore, the set of requirements plays a crucial role to determine whether the use of a copyrighted work is a fair use.

This article is aimed to examine Google v. Oracle case and how the court should have determined the copyrighted status of API instead of focusing on reviewing the fair use doctrine. Moreover, this article will analyze the implication of the copyright status of an API to the digital trade agreement and policies based on TRIPs. In Google v. Oracle case, the fair use doctrine has extended to a transformative use of computer programming such as Java API in order to build a new software platform. This article will first examine the nature of API and whether it is copyrightable. Then, the author will examine the United States Supreme Court’s judgment in the Google v. Oracle case, which has neglected to further explain the copyright status of API and make clear guidelines on the protection. Finally, the author will evaluate how TRIPs can impact the protection of API that has been used in the international digital trade.

RESEARCH METHODS

This study uses a doctrinal legal approach through a normative legal research, in which this article examines the theoretical aspects of fair use doctrine and studies the development of the concepts. Furthermore, by using the normative legal research this article will focus on the study of the concepts of law, legal principles and positive law and also involves an analysis of case law, particularly the Google v. Oracle case. By using the traditional legal research methods, the author uses the secondary materials as research data which are obtained through library research, legislation, scientific articles, books and various legal

analyses as the main formal source of information. Based on the series of analysis using the normative legal research methods which usually will try to solve a problem by concluding the analysis with advice, This article aims to analyze the copyright status of API which in Google v. Oracle case, the district court and the federal circuit have a different ruling regarding the copyrightability of an API which the Supreme Court has neglected. Therefore, this article will answer the question regarding the copyright status of API? Moreover, taking into account the fast increasing usage of API particularly in cross-border trade as a trade facilitation, this article examines the question, even if the API shall be protected under the copyright, how is it going to impact international trade?

RESULT AND DISCUSSION

Copyright Law: Application Programming Interfaces

Generally, technological works like computer software may fall into two or more of intellectual property modes. For example, a technology machine is eligible for a patent rights while the software code that functions to run the machine is characterized as literary text and protected under the copyright. In order to understand the copyright concept, one has to acquire a knowledge of the nature of copyright law and its recent development to better understand why the copyright protection of API has been debated particularly in Google v. Oracle case. In the United States, the copyright law has been written since 1787 when the constitution started to be aware of the importance of promoting the development of science and useful arts by granting the creators the exclusive rights to their works. This clearly demonstrates that copyright protection benefits not only the creators, who gain financial rewards and recognition for their work, but also the government and society at large. The government benefits through increased tax revenues and economic growth driven by creative industries, while society enjoys access to a diverse array of high-quality, copyrighted works. This encourages further cultural and intellectual development, fostering a vibrant creative ecosystem. It is clear that in order to achieve a higher level of creative ecosystem, the copyright law must be developed over time to keep up with the evolving society which requires the copyright law to be relevant.

First and foremost, the idea-expression dichotomy is a fundamental principle in Copyright Law that separates ideas (which are not protected) from the expression of those ideas (which can be protected). It makes sure that copyright protects the expression of an idea, while still allowing others to use the basic ideas or functional elements. Yet, another doctrine comes into play to distinguish between a copyrightable and non-copyrightable work that is called scene-a-faire doctrine. This doctrine states that any standard, commonly used expression or elements associated with a particular idea that has been considered as a public domain are not subject to copyright protection. The scenes-a-faire doctrine, along with the idea-expression dichotomy, gives courts a way to balance encouraging creativity with keeping a healthy public domain where ideas and common creative elements can be freely shared. By distinguishing between protectable expressions and unprotectable ideas or standard elements, the scenes-a-faire doctrine helps ensure that copyright law doesn't overly restrict the use of common and essential building blocks of creative works. This approach supports both the reward for original creators and the availability of basic elements for others to use in their own creations.

Under the United States Copyright Law, it is governed that Copyright Law does not protect functional aspects of a computer program like program's algorithm, formatting, functions, logic, or system design. Essentially API enables a business service or enterprise asset to be accessible to developers creating applications. These applications can be installed and used on various devices, including smartphones, tablets, kiosks, gaming consoles, connected cars, and more. In most cases, API is not copyrightable which also have been

stated by the District Court for the Northern District of California in Google v. Oracle case However, the case has been appealed to the Federal Circuit that reversed the District Court's statement and held that API is entitled to copyright protection. Initially, in the 1980s the Copyright regime has recognized the protection of computer programs which has resulted in the generally accepted principle that computer programs are protected under the copyright law. The protection of computer programs is also recognized as literary works under the Article 4 of the WIPO Copyright Treaty which stated that "computer programs are protected as literary works within the meaning of Article 2 of the Berne Convention. Such protection applies to computer programs, whatever may be the mode or form of their expression." Moreover, it is also governed under Article 10 of TRIPS that "computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1972)."

Regardless of how the copyright law protects a computer software. However, through the idea-expression dichotomy, the specific way in which a programmer expresses their code is the element that can be protected by copyright law. Yet, the actual processes, methods, or functionalities that the code performs are not covered by copyright protection. This distinction means that while the unique coding structure, sequences, and organization crafted by the programmer are safeguarded as intellectual property, the underlying algorithms, ideas, or techniques that drive the program's functionality remain outside the bounds of copyright law. This separation ensures that while the creative aspects of software development are protected, the fundamental processes and innovations can be freely used and built upon by others, promoting technological advancement and innovation. This perspective also align with the United States Copyright Act section 102 (b) which stipulates that "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work."

In examining the copyrightability of API, one may argue that API itself comes from an intellectual creativity therefore based on its originality element, is entitled to copyright protection. On the other hand, some believe that API is not eligible for copyright protection since it was created as a lever and gears for particular digital machines. The nature of an API itself was created through sets of code, allowing applications to access data and features from other applications, services, or operating systems. They serve as a bridge or connection between two systems or programs, facilitating the exchange of responses between them. For example, when making a purchase and using a payment gateway, a user relies on an API to access the bank's services through a third-party system. This API functions as an intermediary, allowing the payment gateway to securely communicate with the bank's system to verify payment details, authorize transactions, and transfer funds. By enabling this seamless integration, APIs facilitate efficient and secure transactions between different platforms, ensuring a smooth user experience during online purchases.

It can be considered that an API is a collection of rules and protocols that allow software applications to communicate and interact with each other, facilitating the exchange of data, features, and functionality. Essentially, an API can be considered a method of operation because it defines the way different software components should interact, much like a set of instructions or guidelines. This method of operation is essential for building interconnected software ecosystems, allowing different applications to utilize each other's capabilities, thereby improving overall functionality and enhancing the user experience. Therefore, in regards with the question whether an API is copyrightable or not, it is fair to say that as a method of operation that have been known to programmers have been constitute as scene-a-faire which translate to "scene that must be done" which means elements within

an original work that are so standard, commonplace, or inevitable in a particular genre or type of work that they are not eligible for copyright protection.

The Copyright Lawsuit over an API in Google v. Oracle Case

To begin with, Oracle America, Inc (Oracle) is one of the tech giant companies that owns the copyright of a computer programming language popularly known as Java SE. The dispute emerged from the action that Google conducted in 2005, when Google copied approximately around 11.500 lines of code which are a part of API from the Java SE in order to build a new software platform for Android mobile devices. In doing so, Google did not seek permission from Oracle and for this reason Oracle sued Google and claimed that the practice constitutes an infringement of its copyright. At first, the Court tried to assess whether the copyright law could protect a computer programming language such as API. In the next step, the jury will then proceed to examine whether Google's action constitutes an infringement of Oracle's copyright and if so, whether the fair use doctrine may be applied to this case. Unfortunately, the court neglected the first question and assumed that the API is considered to be protected under copyright just for argument's sake and proceeded to examine whether Google's action can be constituted as a fair action or not. Prior to this, the District Court has held that API cannot be protected under the Copyright Act. This judgment has led Oracle to appeal the case before the Federal Circuit that held an API is protected under the Copyright and stated that "there is nothing fair about taking a copyrighted work verbatim and using it for the same purpose and function as the original in a competing platform." Clearly, rather than making clear guidelines about the Copyright status of API, the Supreme Court has neglected the fundamental question on the copyright status of API before jumping into the fair use doctrine claim. Moreover, Justice Breyer stated that "given the rapidly changing technological, economic, and business-related circumstances, we believe we should not answer more than is necessary to resolve the parties' dispute. We shall assume, but purely for argument's sake, that the entire Sun Java API falls within the definition of that which can be copyrighted."

The application of fair use doctrine is a common practice in the American copyright law to limit the monopoly right of the copyright owner which stipulated under the Copyright Act of 1976 section 107 that governed the limitations and exclusive rights or the so called "fair use doctrine." The fair use of a copyrighted work, whether through reproduction in copies or phonorecords or by other specified means, is not considered copyright infringement when used for purposes like criticism, commentary, news reporting, teaching (including making multiple copies for classroom use), scholarship, or research. Section 107 also contains the requirements to determine if a specific use qualifies as fair use, certain factors must be evaluated, including:

1. The purpose and nature of the use, considering if it is for commercial gain or for nonprofit educational purposes;
2. The nature of the copyrighted material;
3. The quantity and substantiality of the portion used relative to the entire copyrighted work; and
4. The impact of the use on the potential market or value of the copyrighted work.

The Supreme Court ruled that Google's use of parts of the Java API to develop the Android platform was legally considered fair use. In deciding such cases, the Court turned into the process of examining the four requirements of fair use and expanded the concept of transformativeness in their fair use analysis, acknowledging how Google's adaptation of the Java API in a new context was significant. If the Supreme Court provided clearer guidance on how to balance the four factors in determining fair use, it could alleviate concerns about fair use being too restrictive. For instance, if the Court decided that Google's use of the Java APIs wasn't fair use because it simply replaced Java SE for mobile phones, it would suggest

that genuinely transformative works, even if they have commercial purposes, could still be considered fair use. This would make the fair use doctrine more predictable and reassuring for future cases. In addressing the four requirements of fair use, the court assessed Google's action by reimplementing the API and creating a new product which constituted a transformative use and therefore fair use in this factor.

However, the Court should not have constructed such a far analysis especially in regards with the fair use doctrine claim when the API is functional and considered as a method of operation which was not protected under Copyright. The nature of copyrightability of API itself was still a big question since the court was less focused on the functional consideration of an API in which Justice Breyer also stated that "Congress to think long and hard about whether to grant computer programs copyright protection." Considering the functional element of API would make the copyright protection for the declaring code of the 37 API packages should be considered minimal because their design and creation involve substantial functional aspects. Essentially, works that contain functional elements are likely to receive limited copyright protection and are more easily restricted under the fair use doctrine. The Copyright Act allows Congress to define what kinds of works can be copyrighted and sets boundaries on the exclusive rights of copyright holders. These boundaries are created in order to avoid any potential negative effects that copyrights might cause. Additionally, copyright protection does not cover methods of operation, which includes APIs. Thus, APIs fall into a category that is not eligible for copyright protection.

By ruling in favor of fair use, the Supreme Court affirmed longstanding practices in software development. This decision has significant implications for the industry, as it validates the common practice of using existing code and APIs to build new and innovative software. Nevertheless, considering that API should not be protected under copyright act, therefore the application of the fair use doctrine should be limited only for the copyrighted work. Furthermore, in accordance with the idea-expression dichotomy doctrine, the API is constituted as scene-a-faire which should make the court limit the applicability of fair use doctrine. Regardless, the Court ruling on this case not only supports the collaborative nature of software development but also encourages continued innovation and growth within the tech sector. It reassures developers that reusing and adapting existing technologies within fair use boundaries is legally protected, thus fostering an environment where creativity and advancement can thrive.

Application Programming Interfaces (APIs) Copyrightability based on Trade-Related Aspects of Intellectual Property Rights (TRIPS)

API has a relevant role in cross-borders payments driven by the globalization of trade, especially in regards with its function to provide a seamless connectivity and data exchange between business and trading partners across borders. For example, the use of API in the payment system may create more interoperable payment systems. APIs offer a neutral method for exchanging financial data across different networks. Today's payment systems use various messaging networks for payment service providers to share financial data, such as SWIFT, the main channel for cross-border payments. With proper security, APIs can facilitate financial data exchange over almost any telecommunication network, whether public or private, including the internet. The importance of API also derived from the G20 cross-border payments programme that endorsed significant enhancements in the speed, cost, accessibility, and transparency of cross-border payments in which one of the actions needed to be conducted is harmonization of API in cross-border payments.

The digitalization of trade also impacted the increasing use of API that made the API become a crucial element of international trade particularly to function as trade facilitation. This initiative creates new challenges for policymakers to support the digital trade agenda

and shaping relevant regulations. Although there is a school of thought that believes that APIs should get the same copyright protection as other software products. Supporters argue that there are many ways to design an API and that the creative decisions made by developers should be protected by copyright law. They also believe that not giving APIs copyright protection would undermine the efforts and investments of software companies. It has been argued that if APIs are covered by copyright, it would increase the opportunities for software companies to recover their investments through various licensing options, allowing them the freedom to make such choices. Regardless of how the API creates a significant impact on international trade specifically in regards with its role as trade facilitation, the TRIPS agreement in Article 9:2 did not provide an extension of copyright protection to ideas, methods of operation or mathematical concept.

Moreover, on the other side of the pond, the Court of Justice of the European Union held in SAS Institute v. World Programming Limited case that the Software Directive does not provide protection for program functionality, programming languages, and data formats, as these elements are essential for interoperability. Essentially, even if the API is considered to be entitled to copyright protection based on originality and creative aspects, it would also not aligned with the competition policy which governed under Article 8:2, Article 31, and Article 40 of TRIPS that stipulates that members permitted to take measures to deal with anti-competitive licensing practices or other abuses. If the API must be protected, it would cause chaos in the computer industry and potentially would create a negative effect on innovation. In regards to the Google v. Oracle case, the protection of Java API would create a monopoly effect on the computer industry since most of the programmers are already used to the Java API owned by Oracle and therefore, Oracle would have full control over the usage and innovation which arises from the Java API.

CONCLUSION

As explained above, the emergence of technology in today's era would create a complex issue relating to innovation and the protection of intellectual property in the digital era. Even though intellectual property protection laws have been around for quite some time, this new era that we are experiencing now has dived into a new digital world filled with a fast increase of development and innovation. In this regard, this phenomenon left the policymakers with challenges to construct regulations that would protect the intellectual property derivative from a technological innovation while still maintaining the flexibility for the technological development that can be done and accessed by the public.

In the United States of America, the court has ruled on a landmark case relating to software copyright disputes between two tech giant companies in the Google v. Oracle case. Essentially, this case was brought before the court in view of the fact that Google was sued by Oracle because Google had copied 11,500 lines of codes owned by Oracle that have led to Oracle filing a lawsuit and claiming that Google had infringed Oracle's copyright. To sum up, the court was in favor of Google that such conduct by Google does not constitute an infringement of copyright and therefore the usage of such programs is a fair use. However, the court has neglected a fundamental question on whether the API itself is entitled to protection under the copyright. This article uses the idea-expression dichotomy or it is also well known as the scene-a-faire doctrine which states that the copyright does not protect any idea or knowledge that is already considered to be a part of public domain.

Later, it is found that API has a functional role as a bridge of two software systems that is commonly used in the digital payment system that connects the customers to banks or any of payment system providers to purchase an item in the marketplace. This functional element of API would represent a method of operation that is not protected under copyright. Consequently, the court in the Google v. Oracle case must limit the usage of the fair use

doctrine for the work that is not protected under the copyright. The existence of API also has a significant impact in international trade relating to the digitalization of trade, especially in its relation with cross-border digital payment. In this context, the harmonization of API plays a crucial role to create an easier payment system as a trade facilitation. For that reason, as a method of operation and is not considered as an expression of an idea, TRIPS also did not protect an API under its regime even though the product itself fulfilled the originality and creative aspects of copyright.

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