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*Megha Middha, is working as an Assistant Professor of Law in Mody University of Science and Technology, Lakshmanagarh, Sikar (Rajasthan). She has an experience in the teaching of almost 3 years. She has completed her graduation in BBA LL.B (H) from Amity University, Rajasthan (Gold Medalist) and did her post-graduation (LL.M in Business Laws) from NLSIU, Bengaluru. Currently, she is enrolled in a Ph.D. course in the Department of Law at Mohanlal Sukhadia University, Udaipur (Rajasthan). She wishes to excel in academics and research and contribute as much as she can to society. Through her interactions with the students, she tries to inculcate a sense of deep thinking power in her students and enlighten and guide them to the fact how they can*

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## Avinash Kumar



*Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC - NET examination and has been awarded ICSSR - Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research*

*methodology and teaching and learning.*

## **ABOUT US**

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

# Laws Protecting Ui/Ux Design

Authored By - Jakka Kuswanth Yayaswi

IPL02023, Section-A

Copyright Law: Intellectual Property Rights

INDIAN INSTITUTE OF MANAGEMENT, ROHTAK

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## Theoretical Background

The recognition and protection of intellectual creativity (*literary and artistic creation of human beings*) by law is referred to as Copyright. It is an exclusive right recognised by law for a given period for an author to print, publish and sell copies of his original work. He reserves the entire, complete ship over the originality of his career and ensures that it is not copied or used by somebody else without prior permission.

The creative mind of human being leads to the creation of intellectual property, which, when properly utilised, can lead to financial gains. Forms of intellectual properties are inventions, industrial designs, and literary and artistic works. The human endeavour that promotes society's economic, social, and cultural development must be suitably rewarded by awarding legal protection. The IPRs (*Intellectual Property Rights*) are the legal rights governing these creations of innovative minds of people; it is the creatiproductany unauthorised and unjust utilisation without the owner's permission. Therefore, this is a branch of law that protects the innovative manifestations of extraordinary human minds.

Design is an aesthetic appearance or outlook on a product. Its purpose is to attract the attention of the customers. Whenever people purchase any goods, from textiles to electronic items, they get attracted to the design of that product. Therefore it is also essential to maintain the originality of a design by providing legal protection against copying.

## Aim and Objective

Copyright automatically rises when new and original artwork is created. The original and unique UX/UI design of a web app or website made by human creativity can be registered and protected by copyright as "artistic works." This hypothesis's main aim/objective is to deduce whether UI/UX can that e protected by copyright and reveal ways to preserve the text of this UI (*User Interface*) Intellectual Property, which is also a form of artistic work. In India, many laws came to protect the copyright of GUIs under copyright as well as Design law. Computer programs are protected as literal work by Indian Copyright Act, and hence, the look and feel of the Graphics User Interface can be covered under Indian Copyright Act. We are also going through how Intellectual Property

protects UI/UX design and how acquiring protection internationally requires a careful approach because different countries require different eligibility requirements. It may be hard to meet them.

## Scope of the Project

The project's main scope is to show that UI/UX Design, an artistic work made by a particular developer of particular sites, is protected under copyright law. Generally, big companies are more to worry about and are more at risk than the alone developer who writes an app. The GUI (*Graphical User Interface*), which plays a significant role in defining product quality, should come under the Law of Designs Act 2000. According to the act, “designs” means only the feature of shape, configuration, pattern, ornament, or composition of lines or colour applied to any article, whether in two dimensions or three-dimensional or both forms by any industrial or technological process, whether manual, mechanical or chemical, separate or combined, which in the finished article appeals to judge solely by the eye.

In this, I will deduce how to protect UI intellectual property and whether it can be covered under the Copyright Act of 1999.

## Limitation of project

The primary objective of this study is to analyse the methodology of how a design comes under copyright protection and ways to protect UI intellectual property. The project only emphasises the key features of Copyright of Intellectual Property (*Design Law*), their implementation, and the views of the public and judiciary towards this content issue. Further project research will be done using secondary data sources in future recognitions.

## Literature Review

This review is based on the article (Rahul Jinh, 2021)<sup>1</sup> titled “*Protecting UI/UX Design using Intellectual Property.*” In this article, he mentioned how the laws are derived from UI Design since it is a web-designed artistic work.

In the modern world, where design permeates everything from our clothing to the websites we visit, a distinctive design becomes a valuable asset that must be safeguarded. Any website's UI/UX (UI / UX Experience) design is crucial, and GUI refers to the screen controls you use to access different features of web apps (Graphic User Interface). Companies invest heavily in UI/UX because it is a crucial component of how a website looks and feels. Because it has emerged as a new type of intellectual property and a significant differentiator in the market, global IP protection is uncertain, which is a major worry for businesses that do not want their designs copied.

A literary, dramatic, musical, or aesthetic work inherently creates copyright. Therefore, as "artistic works," the creative UI/UX design principles can be copyright-protected. However, the protection provided by copyright is restricted to copying a significant component of the UI/UX design element. Therefore, an alleged digital rights infringer can escape penalties if they change the intelligent design element.

While trademark registrations are not the best approach to protect the GUI, they are the best way to save some easily recognisable UX aspects that are not most likely to change, such as Instagram's "Comment" button. Additionally, designs that are well recognised by the public might be protected under the Trade Dress law, which "*refers to the qualities of the visual look of a product or its wrapping that signal the source of the goods to customers*" (*design of a coke can*). Trade dress protection can be challenging to obtain because it intricately interacts with copyright protection.

Despite these shortcomings, trade style may be utilised instead of or in addition to UI copyright in some circumstances, particularly if the originality of the UI element in

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<sup>1</sup> Jinh R. Protecting UI/UX Design Using Intellectual Property. *Protecting UI/UX Design Using Intellectual Property*. 2021. Available from: <https://www.copperpodip.com/post/protecting-ui-ux-design-using-intellectual-property>, accessed on October 17, 2022. (Jinh, 2022)

question is deemed insufficient. Comparatively to the copyright law's protection of specific UI components, trade dress is better suited, within its bounds, to safeguarding the overall appearance.

GUIs are susceptible to innovation or utility patent protection. Filing individual patents to safeguard the UX's overall aesthetic and specific design components is possible.

A new, unique, and ornamental design that is "*embodied in or adapted to an article of manufacture*" is covered by a design patent. Interestingly, interactive UI/UX design features are also protected by design patents. For instance, the "*page flipping*" function in Apple eBooks is covered by U.S. new patent No. D670,713.

"*Issued for the creation of a fresh and useful process, apparatus, manufacturing, or combination of matter, or a new and advantageous improvement thereof,*" according to the definition of a utility patent.

The guidelines above make it quite evident that no single legislation can fully protect UI/UX. Instead, each IP right offers a unique defence for the various components of the overall UX. Patents are the best weapon for UI/UX protection in several ways:

Legally, things that fulfil a function are far better suited for patent protection.

The threshold for infringement is lower. At the same time, patent interference can be established if a design is substantially similar but not duplicate; copyright infringement necessitates copying.

There is no fair use clause in patents. Fair use permits the restricted use of copyrighted content without requesting permission; for instance, it is OK to quote some publications in an article directly, but this is not the case for patented material.

This review is based on the article cited by (Stephens Scown, 2019)<sup>2</sup> titled "*Protecting your User Interface and User Experience Design.*" In this article, he mentioned that the User Interface or User Experience Design laws originated in New Era.

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<sup>2</sup> Scown S. Protecting your User Interface (UI) and User Experience (UX) Designs - Stephens Scown. *Protecting your User Interface (UI) and User Experience (UX) Designs*. 2019. Available from: <https://www.stephens-scown.co.uk/intellectual-property-2/protecting-your-user-interface-ui-and-user-experience-UX-designs/>, accessed on October 17, 2022. (Scown, 2019)

- Clients learn about your brand, principles, and selling points here.
  
- While a good user experience will support your stance, a bad one will result in an immediate significant impact on brand perception.
  
- The methods you can use to safeguard these assets are covered in this paper. There are two types of design rights in the UK: registered and unregistered.

Unregistered design rights automatically preserve the appearance of many practical, physical objects. However, it is essential to note that the unregistered design rights do not cover surface embellishments. Therefore, this paper will focus on registered designs at the UK level.

Registered designs may protect the design or layout of your UI procedures and can be utilised to safeguard surface ornamentation. A plan must be new and have individual characters to be eligible for registration.

For up to 25 years, a UK-registered design grants you the sole right to use the method in the UK. It serves as a reminder of your rights to others and as documentation of those rights. A product or service with your design may not be manufactured or distributed in any other way if you utilise your relevant patent right.

Although registered designs are not particularly expensive, they could significantly increase the worth of your company as a tool for intellectual property protection.

Equal rights exist at the European Union level (Registered Community Design).

Your clients will be encouraged to identify your name and brand with your products and services and their pleasant evaluation on our website or app if you use effective marketing techniques. You want to ensure you get all the glory for their satisfying user experience when you accomplish something.

You can accomplish this with the aid of trademark registrations. They should be applied to your important markets because they are territory-specific.

A registered trademark can grant you a monopoly in your branded version and logos for the pertinent goods or services you offer for the duration of your business. At the same time, you continue to pay the renewal costs.

Your UI and UX were not created in a vacuum; they required time and resources to

develop. Both the content of your website/app and its intellectual property have worth.

Copyright will be included in most of your material and the code and software that power your website, making it the most important intellectual property right to take into account in this case.

It is a frequent fallacy that you immediately control the intellectual property of the finished product if you hire a third party to develop a product or provide a service. This is not the case. Thus, you must ensure you are the sole owner of all copyright for your website or app. In cases where you have hired outside photographers and content creators or outsourced development, they will need to assign their copyright ownership to you. You might only be able to use their work in specific ways if they do not release your rights. The efficient use informs the creation and tailoring of the UX of your databases.

Your website or mobile app is a crucial entry point for information about your company. When used correctly, this data should give you information on your respondent's demographic profile, client behaviour, purchasing patterns, and churn, among other things. However, it is doubtful that data will produce the expected results unless it is organised consistently or logically.

This review is based on the article published by Author (Avanee Tiwari, 2020)<sup>3</sup>, who works at *Chadha, and Chadha Intellectual Property Law Firm* titled the piece "*Act of GUI.*" In this article, the author gave his opinion about how the GUI (Graphical User Interface) acts on the ongoing changes of copyright in intellectual property and gave his significant life to this.

User Experience (UX) design is the foundation of today's software and website development organisations and is also the key to their success. "*User experience*" is defined by Don Norman as "*all facets of the end-interaction user with the enterprise, its services, and its goods.*" The ultimate goal of UX design is to provide users with simple, effective, pertinent, and overall enjoyable experiences.

A crucial component of UX design is the graphical user interface (GUI; pronounced "*gooey*"), which replaces command-line interfaces, which require users to type a command

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<sup>3</sup> Tiwari AA. Act of GUI: The Indian Dilemma - Lexology. *Act of GUI: The Indian Dilemma*. 2020. Available from: <https://www.lexology.com/library/detail.aspx?g=fd26c2f9-f375-4a54-bca5-2b20abf33167>, accessed on October 17, 2022. (Tiwari, 2020)

into a text box to perform a function, as the user's point of engagement with a digital device or product.

Methodologically, copyright and design laws in India might protect graphical user interfaces. The Bombay High Court stressed that copyright in software programs also extended to its "structure, sequencing, and organisation" in *Maraekat Infotech Ltd. v. Naylesh V. Kothari*, implying that the GUI of software would also be protected. The Minister of Electronics & Information Technology supported this by stating, "Copyright protects the method of expression and can be utilised to protect the raw data and the object code of a computer program." The Indian Copyright Act also protects programming codes as literary works. Hence, copyrights may cover the Graphical User Interface (*GUI appearance*).

The Designs Act, 2000, and the Designs Rules, 2001, as amended in 2008 to accord with the Locarno Classification system, govern the protection of designs in India. The change above added Class 14-04, devoted to "Screen Displays and Icons," among other things. The same does not, however, imply that GUIs are inherently protected in India.

The patent dispute between Apple and Samsung, which began in 2011, came to a close in 2018, with Apple receiving \$539 million in compensation for Samsung's violation of its original design. It is fascinating to observe that when comparing Apple's patents asserted against Samsung, which included those for touchscreen interactions, using an API to swipethrough documents, tap-to-zoom, general outline, and highly decorative design, ornamental design, and GUI for a computer display, it becomes clear that Apple was primarily concerned with preserving the "Total User Experience" of the iPhone and other Apple iOS devices. Samsung, on the other hand, asserted patents.

(Jeremy Aber 2010)<sup>4</sup> published this article titled "Reasons to Register Your Software for Copyright Protection." He mentioned the reasons to protect Software property designed creatively for copyright registration. Here are the ways he said in this article:

- Easy. You can do it on your own or with legal assistance. Your choice; however, any competent attorney will advise you to consult a patent and copyright practitioner before filing. However, generally speaking, filing for copyright protection is not tricky.

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<sup>4</sup> Aber J. 4 Reasons to Register Your Software for Copyright Protection - OpenView. *Reasons to Register Your Software for Copyright Protection*. 2010. Available from: <https://openviewpartners.com/blog/4-reasons-to-register-your-software-for-copyright-protection/>, accessed on October 17, 2022. (Aber, 2010)

Therefore, this is not a problem.

- Fairly priced. The modest filing fee (less than \$100) is also not a barrier.
- Attorney fees are reimbursed. According to federal copyright law, you may be entitled to attorney's fees reimbursement if you bring an infringement statement based on a claimed patent that was in existence before the infringement. This is significant in light of how infrequently plaintiffs in legal proceedings are compensated for their legal expenses. However, this can be a double-edged sword since if you lose, you can have to foot the bill for the defendant's legal expenses (i.e., something to discuss with your lawyer before you file the case). However, you must file within three months after the work's publication to be eligible for reimbursement of your legal expenditures (*if it is published*).
- Statutory Damages Awarded Statutory damages allow you to receive a set amount of compensation without navigating the challenging (and expensive) process of demonstrating your actual losses. This is significant because you have an alternative payment method for the infringement; it might be challenging to illustrate the harm a copyright infringement caused to your firm. These penalties, which a judge imposes with some discretion, can be as expensive as \$30,000 per piece and \$150,000 per performance for unauthorised copying.
- Reiterating the requirement to file earlier (within three months for scholarly papers) to be eligible for statutory damages, consult a national copyright attorney regarding the timing concerns.

This article was published by (Mark D. Penner)<sup>5</sup> titled, “*If UX/UI sets your technology apart, your IP strategy may be the real differentiator in the marketplace.*” He noticed some of the key things in his article about User Interfaces Copyright and the Advantages and Disadvantages of Copyright in UI/UX Design.

The graphical user interface is a crucial component of UX/UI design because it enables

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<sup>5</sup> Penner M. *If UX/UI sets your technology apart, your IP strategy may be the real differentiator in the marketplace* - Lexology. *If UX/UI sets your technology apart, your IP strategy may be the real differentiator in the market*. 2016. Available from: <https://www.lexology.com/library/detail.aspx?g=7fe7d75c-f76a-460e-876c-b184a97807b0>, accessed on October 17, 2022. (Penner, 2016)

customers to communicate with electronic equipment through graphic symbols or other visual indicators rather than content interfaces. To keep your product's uniqueness in the marketplace, it will become more crucial to protect the "aesthetic" of these GUIs, icons, and other visual cues, generally known as the UX/UI design elements. In the past, copyright has been used to protect media such as movies, music, and artwork. Original UX/UI design components are considered artistic works and are subject to copyright protection.

## **Advantages:**

Unlike other intellectual property (IP) rights, copyright is not necessarily to be registered; if it is, it is cheap and straightforward to complete. As a result, copyright is one of the most affordable IP rights to acquire.

## **Disadvantages:**

The drawback of copyright protection is that the claimed infringer must have reproduced a significant amount of the UX/UI design feature. A rival may escape liability by altering or "design-around" the protected design element. Although copyright protection seems to have numerous advantages, these drawbacks tend to make it less significant to UX/UI design businesses.

Trademarks aim to set one entity's products and services apart from competing companies. These can be phrases, visual elements (*such as logos*), audible cues, and any other elements that are arguably characteristic of the trademark holder. Both use of the mark (also known as "*common law rights*") and licensing of the mark with the appropriate intellectual property office, such as the Canadian Intellectual Property Office (CIPO) or the United States Patent and Trademark Office (USPTO), can result in trademark rights in the U.S. and Canada. Office of Patents and Trademarks (USPTO)).

Unlike copyright infringement, trademark violation does not require that the offending UX/UI design element is directly replicated. In other words, the UX/UI geometric shape utilised by the alleged infringement need not be exact to the mark as used or protected; it only needs to be close enough to raise a possibility of confusion. Trademarks can last in- as well, unlike other Intellectual properties that have expiration dates, so long as the mark continues to be used and is identifiable as belonging to the owner.

For the UX/UI design element to be recognised, it must operate as a trademark. When it comes to goods, the UX/UI design element serves as a trademark if it is marked on the products, shown on their packaging, or otherwise connected to the products in a way that makes the recipient of the goods aware of the connection between the trademark and the product. If a UX/UI design element is employed in the rendering or promoting of services, it acts as a trademark in connection with those services. About services (i.e., *cloud-based computing services*), this will probably be a more straightforward burden to meet, given that the user utilises the services by touching or clicking on the symbol. The customer should see the UX/UI design element while purchasing or downloading the program if it is registered or used in conjunction with items (*like software*) (e.g., *iTunes or Google Play™ stores*).

Since **UX/UI** design elements are predicated on design choices, protecting the purely aesthetic elements becomes significant. Industrial designs in Canada and patents in the United States are becoming increasingly important to companies developing UX/UI.

A product using a design that is protected by an industrial design or design patent cannot be produced, sold, or offered by a third party. More crucially, industrial design/design intellectual property protection is not restricted to static components; interactive UX/UI design features are also protected under U.S. patent application No. D670,713, such as the "pages turning" in Apple eBooks. Finally, obtaining design protection is substantially less expensive and time-consuming than obtaining a utility patent.

An icon or interface must be innovative and sufficiently different from other parts to qualify for industrial design/design patent protection. Only the decorative or aesthetic elements of the design, not its functional features, may be protected by this intellectual property right. Like patents, industrial designs must be registered to be enforced, unlike copyright and trademarks.

The information mentioned above makes it evident that numerous IP rights can be used to safeguard UX/UI design aspects. Both setup and established tech organisations should consider implementing a strategy to protect essential components of their businesses' UX/UI design elements using all of the applicable IP rights described above. Companies will be well-positioned to capitalise on the opportunities ahead by implementing an efficient approach that includes all of the IP outlined here.

The author published this article by (Abhishek Joshi 2020, accompanied by Sudip Mahapatra 2020)<sup>6</sup> Law Graduate, titled “*Need for an Hour.*” They observed and carried the change in Copyright laws regarding new arrivals of Graphical User Interfaces.

Most modern operating systems' user interfaces are called "*graphical user interfaces*" (GUIs). A graphical user interface (GUI) uses a pointing device (such as a mouse, trackball, or touch screen) in addition to a keyboard to allow users to interact directly with graphical images and widgets, including windows, menus, radio buttons, check boxes, and icons in addition to text. The renowned What You See Is What You Get (WYSIWYG) philosophy of modern computing is the foundation for the GUI. The operating systems Mac OS and Windows are two examples of systems that support GUIs.

Researchers at the Stanford Research Institute, under the direction of Doug Engelbart, created the first GUIs when they started and used text-based hyperlinks for the On-Line System.

The simplicity of use offered by GUIs, the rapid developments in computing technology, and the sharp drop in the price of hardware supporting GUIs have led to the dominance of GUIs' base products in the software markets worldwide. More than 90% of users worldwide utilise a GUI-based operating system. The main access point on all popular operating systems, including Mac OS X, Windows XP, and Linux, is a graphics-based user interface.

Graphical User Interface and Menu Command Copyright Protection One of the main topics in the discussion of software copyright protection is a hierarchy. Since then, software programs have been included in the scope of copyright protection; actual copyright infringement of programs has been a pretty simple problem that has been manageable. Defence of a program's "non-literal parts," such as user interfaces, has proven to be significantly more challenging and contentious. According to court rulings, both the literal and non-literal components of a computer program may be protected by copyrights. Still, an original expression must be present for the copyright to apply to the non-literal features.

The use of "non-literal" intellectual property has been the subject of a contentious discussion in academia and the software sector. Many critics have suggested that the software industry and consumers have suffered due to courts' reluctance to provide graphical user

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<sup>6</sup> Abhishek J, Sudip M. “Need for an Hour.” *Copyright Protection for Graphical User Interface*. 2020. Available from: <https://www.legalserviceindia.com/articles/crind.htm>, accessed on October 20, 2022. (Abhishek Joshi, 2020)

interfaces with any form of intellectual property protection. Since the first diagrammatical software program was introduced in 1984, there have not been any significant advancements. Until courts apply a reliable and consistent method of guarding graphical user interfaces (to spur competition and promote technological progress), computer users will primarily be constrained to standardising GUI designs without significant advancements.

Professor Arthur R. Miller, a proponent of user protection, said, "*Creating a software program's user interface requires many resources, and a well-designed user interface is commonly what makes a program successful. Promoting unauthorised interface copying pe-analyses the original designer's creative work, which directly conflicts with the fundamental goals of intellectual property law because it may effectively halt or significantly slow down technical advancement and human creativity*".

Additionally, an user experience is a multimedia work that may include a screen display that frequently incorporates enough expression in its choice and arrangement and the individual pieces to justify copyright protection. Additionally, a compilation of a multimedia work may be classified as such if the selection and organisation of the various components within the work exhibit an adequate level of originality.

The court created the criteria for infringement of non-literal aspects of a program by another well-known abstraction-filtration-comparison test in *Computer Associates International, Inc. v. Altai, Inc.* In this test, two programs are examined for copyright infringement after being differentiated by their abstraction levels. Any phrase that could not be protected by copyright is restricted or omitted.

In several high-profile cases, like *Engineering Mechanics v. Structural Software*, the courts have used the abstraction-filtration-comparison test to establish if user interfaces have been violated. However, in *Lotus v. Borland International*<sup>7</sup>, the court declined to use the abstraction-filtration-comparison test because the issue at hand was whether or not the Menu Command hierarchy as a whole was copyrightable when making its decision on the subject of copyright infringement of the Menu Command hierarchy (*and not dealing with specific elements*).

This journal was delivered by (Rachel Stigler, 2014)<sup>8</sup> from the North West School of Law

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<sup>7</sup> *Lotus v. Borland International* 516 U.S. 233.

<sup>8</sup> Stigler R. Ooey GUI: The Messy Protection of Graphical User Interfaces. Article 3, Volume 2. *OoeyGUI: The Messy Protection of Graphical User Interfaces*. South America, California: North West University of

and titled the article “*Ooey GUI: The Messy Protection of Graphical User Interfaces.*” He gave information on GUI’s copyright and the Trade Dresses and Design Patents on GUI.

Trade dress takes years to create, necessitating the GUI design to achieve near-fame status before gaining any protection benefits. Trade dress safeguards against confusingly similar designs. In contrast to trademark and trade dress, design patents offer a broader range of protection, shielding whole graphical user interfaces from reproductions that are very close to the original. The delicate balance between a designer's rights and those of society is disrupted by design patents' high cost and protracted duration. Despite these conflicting legal ideas, there is still a protection gap for GUI designs under the current system. A hybrid legal theory based on existing frameworks designed for GUIs is required to correct this.

In the past, command-line or menu interfaces were the only ways for users to interact with computers. A user would type a line of code into a text box on the computer screen, known as a command line, using a command-line interface. For instance, while using a command prompt, the user would enter the following commands: `copy c:/DocumentName.doc a:/document name.doc`, dot, dot, space, a colon, backslash, and return. The document would subsequently be saved by the computer. Like the hang menus used today, the software would present a sequence of text commands in a menu interface for the user to select from.

There are two opposing viewpoints regarding whether GUIs should have broad or specific legal protection. Both are based on the United States Constitution's Intellectual Property Clause, which allows authors the "exclusive right" to their works for a "specified duration" to advance "the development of science and useful arts." By giving inventors a limited monopoly over their creations, the intention is to promote creativity and spread knowledge across society. The crucial question is how "restricted" or broad these "*special rights*" must be to achieve the objective of encouraging development and innovation. For instance rights must be sufficiently comprehensive to enable the original author to profit from their work and recoup their initial investment. Nevertheless, narrow enough to prevent subsequent innovators from being discouraged from developing other breakthroughs. In essence, the Constitution's main objective is to promote the society.

He developed the Alto, probably the first personal computer and home to the first graphical user interface. The GUI transformed the conventional physical desktop into a virtual machine that allowed users to insert and edit digital icons, such as pictures of file folders

and trash cans, to replicate their desktop experience in the actual world. Due to disparities in aspiration for both PARC and the Xerox Corporate Headquarters in New York, Xerox could not market the GUI. After that, Xerox gave Steve Jobs, who had recently co-created Apple, a tour of the PARC facilities and Alto's GUI in 1979. Jobs brought his entire software team back after being so enamored with the GUI and demanding that they all get one. Soon after, Apple added a graphical user interface (GUI) to the operating system of the Lisa and Apple II personal computers. These GUIs were based on Xerox's desktop concept.

This article was published and produced by (Primavera De Filippi 2013)<sup>9</sup> titled "*Law of Cloud: on the supremacy of the user interface over copyright law*" from the University of Paris. He observed changes in cloud computing technologies after polling copyright law over the user interface.

Users who were no longer need to retain this data on their own devices can receive content or information via cloud computing technology. Given that the underlying cloud infrastructure enables cloud companies to control how and to what extent users can take advantage of such content, irrespectively of whether it is secured by copyright law or has already entered the public domain, this is likely to have a significant impact on the effectiveness of copyright regulation in the context of job portals.

This article examines how cloud computing applications, whose user interface is intended to control access to, use of, and to reuse digital information, may circumvent copyright laws and how such applications may be used to create private regulatory systems that frequently go beyond the customary copyright regime.

One issue with cloud applications is that cloud providers can control how users can use particular online services or applications to access, consume, and reuse content or information thanks to technology. Regardless of what end users are ostensibly allowed to do by the law, the user experience ultimately determines what they can or should not do.

Additionally, the limitations imposed by the graphical interface may go much further and effectively forbid actions that are not, in themselves, protected by copyright law. <sup>8</sup> This is particularly troublesome in the example of the public sphere works, whose exploitation is

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<sup>9</sup> De Filippi P. Law of the cloud: on the supremacy of the user interface over copyright law. Internet Policy Review, Alexander von Humboldt Institute for Internet and Society; 2013; 2. Available from: <http://dx.doi.org/10.14763/2013.3.175>. (Primavera, 2013)

restricted by the user experience of specific cloud services despite being technically open for everyone to utilise and reuse. Unless the cloud operators make a distinction, all data stored in the cloud is regarded as straightforward content with which users can only interact through the user interface. This is true regardless of whether the data is public domain or protected by copyright laws.

However, it must be acknowledged that a license requiring any cloud-based service showing a work made available under an open rather than free support to always and necessarily start providing access to the input file to that work would immediately cause an unjustified hurdle for many online companies, and might even demoralise users from uploading their subject matter to the cloud - as it seems highly improbable that cloud producers will transform their Terms of Service (*which itself conflict with the license*).

## Research Hypothesis

The researcher has observed that UI/UX design can be copyright protected.

1. To understand why UI/UX design can be copyrighted
2. To study how to register for copyright protection.
3. To study the significant role in defining product quality should come under the Law of Designs Act 2000.

This should change the material behaviour of making user interfaces in today's era. Changes in decisions made by society will measure the effect. According to the act, "designs" means only the feature of shape, configuration, pattern, ornament, or composition of lines or colour applied to any article. This observation will be going further with the research in the future.

## Research Questions

1. Can UI/UX design be copyright protected?
2. Ways to protect UI Intellectual Property?
3. Does UI/UX design copyright protection change how people work in Organisation or Company?
4. Reasons to protect UI/UX design Intellectual Property?
5. Does the copyright of UI design matter to buyers or manufacturers in any way?

## Research Methodology

The preliminary research design, for all intents and purposes, mainly has been a doctrinal one, in keeping with the project's goal, which is explicitly pretty significant, which kind of actually is quite substantial, which mostly is quite essential. While textbooks and websites have mostly served as secondary sources of information, statutory sources and related web articles, for the most part, particularly for all intents and purposes, have now been employed as moderately primary sources, generally contrary to popular.

Belief, demonstrating that the straightforward research design has been a doctrinal one, in keeping with the project's goal, which type of mainly is quite substantial in a big way.

## Research Analysis

Graphical User Interface and Menu Command Copyright Protection One of the main topics in the discussion of software copyright protection is a hierarchy. Since then, software programs have been included in the scope of copyright protection; actual copyright infringement of programs has been a pretty simple problem that has been manageable. Defence of a program's "non-literal parts," like user interfaces, has proven to be significantly more challenging and contentious. According to court rulings, both the literal and non-literal components of a computer program may be protected by copyrights. Still, the original language must be present for the copyright to apply to the non-literal parts.

### **Landmark Judicial Decisions Regarding User Interfaces and Menu Command Hierarchy Copyright Protection:**

In *(Apple Computer v. Microsoft Corp)*<sup>10</sup>, the court determined that Microsoft's Windows 2.03 and 3.0 did not violate Apple's graphical user interface because a license granted to Microsoft by Apple rendered it unnecessary for the court to decide whether Apple's user interface should be protected by copyright. A graphical user interface that made it simple for users to interact with Apple's Lisa and Macintosh computers was at issue in the Apple lawsuit. This graphical user interface was based on the desktop metaphor and featured

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<sup>10</sup> *Apple Computer v Microsoft Corp.* 35 F.3d 1435

windows simultaneously displaying several things, pull-down menus, and icons. With these pieces, the user might communicate by using a mouse. When Microsoft published Windows 1.0, an operating system that Apple said was significantly comparable to its graphical user interface; Apple filed a lawsuit for copyright infringement of its graphical user interface.

After Apple raised concerns, the companies settled on a license in 1985, allowing Microsoft to utilise and sublicense derivative works based on Windows 1.0. The case was resolved because licensed similarities cannot support an allegation of infringement. However, when Microsoft published Windows 2.03 and 3.0, Apple filed a lawsuit, claiming the new versions violated its copyright on the graphical user interface of its Lisa and Macintosh computers and went beyond the terms of the contract.

The court determined that Microsoft's visual displays were not an infringement but an allowed usage. The court understood "derived works" in the licensing agreement to indicate that Apple's Lisa and Macintosh graphical user interfaces were derivative works of Windows 1.0. As a result, the graphical user interface was not considered a derivative work under the licensing agreement; instead, it was a visual display. Therefore, rather than using the Windows 1.0 interface, the license allowed Microsoft to do derivative works based on the visual displays. This allowed Microsoft to design a graphical user interface comparable to the Lisa and Macintosh user interfaces.

The court also determined no copyright infringement since the visual display, which made up most of the user interface, could not be considered duplicated content.

The argument is made that the court's judgment does not support the idea that graphical user interfaces cannot be protected by copyright, even if it did not find that Microsoft's graphical user interface infringed on Apple's design.

In this case (*Engineering Dynamics v. Structural Software*)<sup>11</sup>, the court determined that an input and output format used in a computer program's user interface was protected by copyright. SACS IV, a computer software created by Engineering Dynamics, was designed to

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<sup>11</sup> *Engineering Dynamics Inc V Structural Software Inc*. Jul 13, 1994. 26 F.3d 1335

address issues in structural engineering. Eighty-column keypunch card decks were used to input the input formats, which held this data, into the computer. StruCAD is a proprietary structural analysis application created by Structural Software. Structural Software based its user interface, which uses an 80-column layout, substantially on SACS. Engineering Dynamics sued structural Software because it had duplicated 56 of its input formats, and then, the order and structure of its input and output formats were protected by copyright.

The Fifth Circuit decided that a computer program's non-literal components, such as structure, sequencing, and organisation, may be protected by copyright. The court then discussed whether Structural Software plagiarised the input and output formats of Engineering Dynamics.

The court used the abstraction-filtration-comparison test to decide this issue. The court divided the user interface into several degrees of generality during the abstraction phase of the investigation to help separate the protectable aspects from those just concepts, operational procedures, and other non-protectable elements.

Because of three factors, the court "found that abstraction of concepts from expression did not constitute a special conceptual difficulty in this case." The input and output formats were first analytically different from the rest of the SACS program's components. Second, Engineering Dynamics asserted that input and output formats were collectively protected rather than individually. The court determined that it was unnecessary to evaluate whether each component constituted an expression or an unprotectable notion because Engineering Dynamics claimed protection for the formats. The court attempted to separate non-copyrightable features from each level of the user interface during the filtration phase of the study. The court found that the influence of the scenes was a fair concept and was the sole potentially unprotectable region after applying the different copyright restriction rules to the remaining parts at each degree of generality.

The district court was then given the case back to finish the filtering analysis and examine the remaining components of Engineering Dynamics' user interface to determine whether or not they were noticeably similar. The court concluded that user interfaces, including input and output formats like SACS that only obliquely communicate thought, are subject to copyright.

In this case (*Lotus Development Corp v Paperback Software International*)<sup>12</sup>, the spreadsheet used by the lawsuit, Lotus 1-2-3, was created in 1982. A separate software developer started working on his electronic spreadsheet while the creators of Lotus 1-2-3 were developing the first iteration of that spreadsheet. Eventually, the defendant's VP-Planner application was created from this spreadsheet. Before VP-Planner was released, its creator, Paperback, decided that the only way to compete with Lotus 1-2-3's growing commercial success effectively was to make VP-Planner "compatible" with 1-2-3 by making sure that the organisation and names of the commands and menus in VP-Planner were the same as those in 1-2-3. In 1985, VP-Planner was released. Due to VP-violation Planner's of Lotus' user interface, Paperback Software was sued by Lotus. Two reasons led the court to reject Paperback's standardisation claims.

First, the court saw its role as restricted to upholding legal requirements and answering open-ended issues in a way that adheres to legislative policy. On a fundamental level, the court refused to engage in "lawmaking" by adopting Paperback's policy arguments as the basis for its decision. The court read Paperback's standards as inconsistent with Congress's intent in passing the Copyright Act. Second, and most critically, the court rejected Paperback's incremental improvements and de facto industry standard claims. The court ruled that Paperback's VP-Planner application violated the Lotus 1-2-3 user interface and that the Menu Command hierarchy of Lotus 1-2-3 was the copyright-eligible subject matter. To come to this judgment, the court principal the idea-expression difference found in copyright law. The court ruled that the concept of an electronic spreadsheet is not protected by copyright. The court did point out that several ways might make the broad idea of an electronic spreadsheet obvious. The court said the expression would be copyrightable if it determined that the terms were unnecessary for an electronic spreadsheet. The court looked at the menu command system and found that the specific system created by Lotus was not necessary for the electronic spreadsheet and was thus protected by copyright.

The court ruled that the menu command system was a form of expression and that Lotus 1-2-3's command structure was unique since other electronic spreadsheet products employ different command structures. Finally, the court found that a significant element of the software, accounting for the program's real popularity, was the Lotus 1- 2-3 user interface.

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<sup>12</sup> *Lotus Development Corp v Paperback Software International* [1990] 37 Civ 740 Fsupp

The district court determined that Paperback Software was liable to Lotus for copyright infringement because Paperback's program substantially copied Lotus 1-2-3, and the user interface was an expression of an idea that was therefore entitled to copyright protection.

More limitations on copyright protection for user interfaces have been imposed by the (*Lotus Development Corp. v. Borland International*)<sup>13</sup> ruling than by any other case. Despite a four-to-four vote and the absence of an opinion, it is also the only case regarding copyright protection for user interfaces that the Supreme Court has upheld.

After Borland created "*an almost identical duplicate of the whole Lotus 1-2-3 menu*" command structure, Lotus filed a lawsuit for copyright infringement. Because "a perfect spreadsheet menu tree could be created utilising other commands and a different command structure from those of Lotus 1-2-3," the district court determined that the Lotus menu command hierarchy constituted a copyrightable expression.

However, the First Circuit overturned the district court's judgment on appeal. The judge used a standard that nullified user interface copyright protection. This test went against accepted copyright principles. The Lotus court determined that a computer spreadsheet program's menu structure constituted an operational technique and could not be protected by copyright. The court used VCRs as an example while deciding on the copyright infringement problem. The VCR buttons, like the commands in the menu command hierarchy, continued to control the VCR, according to the court, regardless of how they were arranged. The court similarly argued that the menu instructions still provided a way to operate the application, even if Lotus organised them differently or used different names. The court found that Borland did not violate Lotus' copyright by including a replica of Lotus' menu commands in its Quattro programs because assigning expressive words to menu commands did not convert an uncopyrightable mode of operation into the copyrightable subject matter.

According to the court's logic, it would be deceptive to apply the abstraction-filtration-comparison test since the fundamental concern should be whether copyrights might protect the menu command hierarchy in the first place rather than specific portions may be. The court then addressed whether the Lotus menu command hierarchy represented a mode of

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<sup>13</sup> *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 516 U.S. 233 (1996).

operation. The Lotus court described a "method of operation" as "the manhood operates anything." The court concluded that the menu hierarchy could not be protected since it constituted a way of operation when using this mission. The court determined that because the arrangement and selection were also a component of the method of operation, they could not be protected.

The court admitted that it was not addressing whether the user interface could be protected but rather just whether a specific element, the menu hierarchy, could. It is argued that because the court was not evaluating whether the interface was copyrightable, this ruling did not automatically restrict user interface protection.

The Lotus court also stated that not safeguarding the menu structure was necessary for computer compatibility. However, the concept of a menu structure or a desktop interface does not prevent other people from creating their desktop interfaces or menus. Additionally, a user might quickly pick up new instructions or configurations.

The court likewise deemed immaterial whether the menu command hierarchy could be conveyed in various ways. The court, however, went on to distinguish between a computer program and the menu command hierarchy. The court argued that while Borland could duplicate the capabilities of the Lotus 1-2-3 spreadsheet application without copying its source code, it was impossible to replicate the powers of the Lotus 1-2-3 menu command hierarchy.

Regarding copyright protection for user interfaces and menu command hierarchies, there is significant disagreement among the software business, the law, and academics. While some claim that copyright protection for user interfaces offers essential incentives for creating better goods, Others have emphasised the significance of standardised software user interfaces, which benefits software users and developers alike.

In this regard, it is essential to remember that the history of software development has shown that the software industry has proliferated and unfettered whether or not user interfaces are covered by copyright. Furthermore, as user interface development has been evolutionary, with one developer taking from the previous ideas of another and then refining user interfaces

further, copyright protection might inhibit growth.

In *Lotus Development Corp. v. Paperback Software International*, the court denied the standardising defences while giving the plaintiff copyright protection. However, the court's rejection of standardisation rules appears incorrect in light of the significance of standardisation in any sector, mainly the technologically industry-connected. Depriving the plaintiff of copyright protection, the court in *Lotus Development Corp. v. Borland International* was justified in recognising the value of interoperability and standards. Additionally, industry practice supports the court's conclusion that the menu command hierarchy is a "method of operation" and not protected by copyright.

In conclusion, we may say that while user interfaces merit copyright protection for particular aspects with enough uniqueness, the defence should not be extended when it impedes standardisation and interoperability.

GUIs are made up of various colour, block, and pattern variants that provide icons, menus, pointers, bars, and screen displays that improve the aesthetics of the device on which they operate. The device's economic worth increases, and GUI developers seek intellectual property protection. Others have followed the US and EU in moving away from providing copyright for GUIs and toward a more benevolent design protection scheme. However, India's policy on graphical user interfaces (GUIs) is still nascent and hazily leans toward copyright protection. This essay addresses the upcoming issue of Design protection, especially in light of the Design (Amendment) Rules 2019, and argues that the fundamental foundations of copyright law render it an ineffective tool for GUIs.

## Copyrighting GUI'S:

Before the development of GUIs, American courts established specific criteria on the scope of software programme copyright protection. In the case of (*Whelan v. Jaslow*)<sup>14</sup>, where a Dental Lab's customer-service management software was accused of violating copyright, the court expanded protection to include the program's "structure, sequence, and organisation." It

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<sup>14</sup> *Whelan Assocs., Inc. v. Jaslow Dental Laboratory, Inc.* 797 F.2d 1222

distinguished a program's function or purpose as the concept, which could not be protected from figurative or creative programme features that were not essential to that purpose or operation and were thus protected by copyright. These components quickly gained notoriety as a program's "concept and feel." However, the Whelan test was disregarded in *Computer Associates International v. Altai*<sup>15</sup>, Inc. in favour of an abstraction-filtration-comparison test, which first abstracted the expression from the idea before filtering out components that were either based on external factors, used for efficiency or were taken from the public domain, such as colours and fundamental building blocks, before comparing the remaining components for infringement. The extent of protection was significantly reduced due to the extra "filtration" that deleted various parts that had previously received copyright.

When Apple sued Microsoft and HP in 1994 for creating their GUIs using Apple-licensed and non-licensed components, it was the first GUI case to go to court. The court chose the Altai rule, notwithstanding Apple's arguments for protection under the look and feel concept. It noted that out of the 189 items in question, up to 179 were outside the purview of the licence, with the remaining 189 being flagged as infringing on a copyright. Developers sought protection elsewhere after this ruling, including the design regime. Later, the CJEU (Court of Justice of the European Union) held that a GUI's visual components are not protected by copyright.

Thus, it is surprising that the 'look and feel of GUIs is promised copyright protection by India's Ministry of Electronics and Information Technology on its website. The nature and scope of this protection are still unclear, given the lack of provisions in the Copyright Act of 1957, specific regulations, or FAQs from the Copyright Office.

Design registrations for GUIs are rising in established technology-sector nations, including the US, Japan, South Korea, and EU states. Given that the significant purpose of a GUI is its visual appeal, this option should be evident.

Microsoft was also permitted to register some of its designs from before 2009 in India under the Class 14-99 or "*Miscellaneous*" category. The Locarno Classification was adopted in 2008, so Class 14-04, specifically for "Screen Displays and Icons," was created.

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<sup>15</sup> *Computer Associates International, Inc. v. Altai, Inc.*, 982 F.2d 693

Developers in India are in a pickle since it is unclear whether they should file for protection for their GUIs under the Design Act or the Copyright Act due to a lack of policy clarity and a complete lack of jurisprudence on the subject. It is crucial to realise that design protection has certain intrinsic advantages over copyright protection for GUIs, especially given that global trends favour the latter.

## **Problems Protecting the User Interfaces of the Internet:**

The inherent, intangible nature of the Internet presents the first obstacle to legally defending the overall artistic appearance and feel of a Web site user interface under copyright or trade dress. The Web site is, first and foremost, an electronic communication. This communication is produced with the aid of a computer programme that functions structurally like software programmes used to manage a person's business or play video games; specifically, the software programmes send requests to the computer's operating system for the visual user interface to be shown to the user. On the Internet, however, a person's final visual presentation on their computer screen will be utilised to draw in potential customers. A firm might get a lot of commercial advantages by setting up a website. For instance, a website may advertise one's business or products, among its many other commercial benefits. These advantages may provide a company with a competitive edge in the market. The user interface, which aids in grabbing a visitor's attention and enables easy site navigation, is thus the most crucial element of the website.

It is also critical to recognise that, because of the lack of a centralised regulatory body overseeing the Internet, Web site user interfaces are a distinct type of electronic environment from those seen in video games or application software. Unlike states with borders, the federal government governs interstate trade by a single, overarching legislation. Even if a central regulatory body did exist, implementing standard regulations would be challenging because of the Internet's size and difficulty in the definition. Most Internet users would undoubtedly reject stringent regulatory restrictions or limitations. Many internet users prefer to keep information flowing freely, even if it infringes on another person's intellectual property rights. State and federal courts must apply existing laws to this new medium to regulate the Internet environment, even though doing so causes several difficulties and leaves

The legal protection of intellectual property found on a Web site is also impacted by many other issues brought on by the Internet. First, it is less expensive to share and copy material online physically than to buy a copy or have it physically distributed. Millions of people are connected by the global interconnection of computer networks known as the Internet, which enables them to access and exchange information at a low cost. Internet users may access free digital copies of priceless intellectual property by uploading shared content to their websites or downloading it. Even worse, these clones may be produced instantly and are of original quality. Second, the simplicity with which such priceless intellectual property may be downloaded via the Internet helps people maintain the belief that stealing is acceptable behaviour. Some people think it is okay to duplicate the design of a rival website, but doing so is just a practical use of knowledge that's easily accessible online. What some refer to as unjustified theft, other Internet users might refer to it as intelligent commercial strategies. Thirdly, it might be challenging to define the limits of the Internet. As a result, it is tough to determine a specific location in cyberspace, significantly challenging traditional ideas of jurisdiction for courts. In every particular case, jurisdiction, venue, and applicable legislation are currently unknown. Finally, identifying potential cyber criminals can be incredibly challenging because it might be challenging to determine an Internet user's precise identity.

Due to customer desire for more inventive and complicated interactive interfaces, the requirement for the look and feel protection will probably keep growing shortly and into the next century. American culture today is inundated with stimuli, particularly visual stimuli. Therefore, companies must employ innovative strategies to grab and hold customers' attention online. Additionally, because modern American culture increasingly depends on the Internet for communication and commerce, commercial Internet usage is essential for any company or entrepreneur who wants to compete in today's marketplaces effectively. Finally, as the Internet becomes increasingly commercialised, companies will seek guarantees that the priceless intellectual property stored on Web sites will be secured, lowering the risks associated with conducting business online.

However, it could be challenging to determine which theory of legal protection is now best suited for defending the priceless intellectual property present in the aesthetics of user

interfaces for websites. Applying current laws to the Internet will be difficult for attorneys and judges. Therefore, given the nature of the Internet environments, using copyright or trademark law to Web site user interfaces may appear like attempting to fit the classic square peg into a round hole. It is, however, a necessary result of the expansion and commercialisation of the Internet.

## Copyright Protection of Website User Interfaces:

Like other areas of intellectual property law, copyright law aims to encourage innovation and creativity by giving property rights as an incentive while preserving public interests. While recognising a property right in an author's creative works, copyright protection also promotes the general public's unrestricted access to information by putting a cap on the types of material covered. Similarly, patent protection encourages innovative and beneficial ideas by giving creators a temporary monopoly so that the public can profit from more effective methods, tools, products, and material compositions. With copyright law, it is challenging to balance the need to safeguard an author's property rights in his works and maintain public access to information. Finding a balance under the law is frequently tricky since protecting intellectual property and public interests conflict.

The definition of "*writings*" that are protected has been liberally defined, and the United States Constitution explicitly grants Congress the authority to award writers exclusive rights in their "*writings*." However, the Copyright Act of 1976 only gives an author's original "*works of authorship*," not all of their writings, copyright protection. This additional language appears to reduce the range of works covered by copyright protection, suggesting that Congress did not intend for copyright protection to include all forms of works protected under the Constitution's copyright protection. Again, this restriction aligns with the general public's need for unfettered access to information. In the end, copyright protection is not the only means of safeguarding all artistic creations in our society. The concept itself is not protected by copyright law; rather, it simply prevents the expression of the idea from being duplicated without permission. Even though the image is the same as one from another author, everyone can express it differently. For instance, a picture of a forest can be protected as intellectual property under copyright laws because of the artist's imaginative use of colour and texture. Still, the forest itself is not individually protected. Only phrases are protected

since copyright protection is intended to foster a competitive economy. This "*idea/expression duality*," as it is known in copyright law, highlights the conflict between the public's right to free knowledge and intellectual property protection. Giving an author the power to prevent others from depicting a forest differently would be unjust and hinder innovation. Copyright law only prevents actions of copying or paraphrasing an author's original work; it does not forbid someone from independently generating an equal representation of an idea.

## Copyright Defense in the Digital Environment:

The Internet is only another medium via which an author may express an idea or disseminate information, much like a canvas in a painting. However, the electronic nature of the Internet presents unique challenges in applying current copyright law. We are not dealing with a physical literary object like a book or a picture, which the law can evaluate more easily. The visual user interface of a computer application is more comparable to a Web site's user interface on the Internet. We must examine the nearest cousin, computer programme user interfaces, as there is no medium of expression that perfectly matches the qualities of a Web site user interface.

A computer program comprises three parts: written code, functional activities carried out by the software, and visual user interfaces. Most computer program components are widely accepted as subject to copyright protection. Additionally, as a result of suggestions made to Congress by The Commission on New Technological Uses for Copyrightable Works ("CONTU") in 1978, Congress added a definition of "*computer programme*" to Section 101 of the Copyright Act and added Section 117 to the Act, which details the specific types of computer programme copying that are permitted. As a result, a written computer programme is protected by copyright under Section 102(a)(1) of the Copyright Act.

However, a computer program's visual user interface could not be unique or comprise functional elements not individually protected by copyright. The graphic screen display and command hierarchy that make up the graphical user interface may be thought of as simply one way to operate a computer. Unfortunately, the Copyright Act specifies that copyright protection does not apply to methods of operation. The meaning of copyright protection has been difficult for Congress and the courts to clarify when it comes to components of computer systems other than the actual code, such as user interfaces.

The source code and object code of computer programmes used to create graphical user interfaces are also covered by copyright protection. Additionally, specific non-literal components of computer programs, that is, non-code components that reveal the fundamental structure and organisation of the programme, are subject to copyright protection. Thus, the user interfaces customers see when they visit a website produced by a computer program might likewise be regarded as a creative, unique expression that qualifies for copyright protection. Section (102(a))<sup>16</sup> conditions of "*originality*" and "*fixation in a tangible medium of expression*" must be satisfied for any expression to be even deemed copyrightable subject matter in a computer programme user interface or Web site user interface. The law states that original works of authorship that are "*fixed in any physical medium of expression, currently known or hereafter created, from which they may be viewed, reproduced, or otherwise conveyed*" are protected by copyright. The phrase "*currently known or subsequently developed*" indicates that the regulation anticipated future technologies and mediums and that they may be regarded as physical mediums for fixation purposes.

Courts have previously ruled that data "*fixed in a physical medium*" refers to data stored in computer read-only memory ("ROM"). The hard drive or hard disc of a computer is another more permanent storage media; permanent in the sense that the information saved stays stored when the power is turned off. The user can remove files from the hard disc. Data on the hard drive may still be accessible after the computer has been shut off since the information is fixed, much like data in the ROM. The instructions for constructing the user interface that a user sees on each corresponding page of a Web site are included in website page files, which are kept on a computer's hard disc. Because the instructions for the layout that will be presented are fixed in the file on the hard drive, the displayed Web site user interfaces probably fulfil the fixation criterion. However, when dealing with the appearance and feel of computer programmes and, similarly, Web sites on the Internet, showing the second factor, uniqueness, might be challenging. This would be especially true for websites that deliver information in an easy-to-understand manner. Although courts have not yet fully addressed this matter, current case law that examines the criteria for determining originality under copyright law offers some insight.

There must be some autonomous authorial production and a minimum of inventiveness for a

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<sup>16</sup> The subject matter of copyright as specified by section 102 includes compilations and derivative works.

work to be considered original. The Supreme Court established principles for establishing whether results were foremost in the landmark decision (*Feist Publications, Inc. v. Rural Telephone Service Co., Inc.*)<sup>17</sup>. In *Feist*, the selection and organisation of phone book listings fell short of the required level of creativity for copyright protection. The Court stated that Section 102(a) of the Copyright Act and the United States Constitution calls for originality. The Court also noted that only a small degree of innovation is necessary and "would suffice." This case is significant because, even by this modest criterion, the choices made for the organisation and display of phone directory data did not meet the necessary standards for copyright protection. The logic in *Feist* suggests that a straightforward Web site user interface that arranges standard information may not be covered by copyright. Unfortunately, after the case, we know what constitutes insufficient creativity, but determining what constitutes sufficient creativity might be challenging.

Additionally, the Court disregarded the "*sweat of the brow*" theory that lower courts had relied upon to support a conclusion of originality. It follows that spending time and effort on a piece of work does not guarantee that it is original. So, simply because an attempt was made to establish a website, its owner cannot claim copyright protection. Additionally, originality does not always equate to "*novelty*," therefore, as long as there is no actual copying, there might be parallels between works that are both regarded as unique. Computer software or a website's visual user interface will probably be impressive if it includes graphics or an individual visual presentation. Even if little innovation is needed, it could be challenging to uncover the uniqueness required for copyright protection in specific Web sites that arrange data or information. Because many entrepreneurs and small businesses lack the resources to create an elaborate site, many Web sites will likely be simplistic. The website may lack highly imaginative, eye-catching graphics and instead focus on functional elements that help users navigate the site's content. A straightforward screen display that requests customer information and does not directly transmit information would probably not acquire copyright protection; nevertheless, according to the Copyright Office's policy banning copyright protection in blank forms.

Additionally, many designs for website user interfaces are simple and offer few options for customising the website. The expression will not be given copyright protection if there are

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<sup>17</sup> *Feist Pubs., Inc. v. Rural Tel. Svc. Co., Inc.*, 499 U.S. 340 (1991)

just a few options for designing a website, causing the concept and the term to blend. Thus, the originality criteria for copyright protection may only be met by sophisticated and moderately inventive Web site interfaces.

## The Development of Computer Program Look and Feel Protection:

The 1976 Copyright Act was amended, showing that Congress intended for computer programmes to be covered by copyright law. Unfortunately, the law does not explicitly state that copyright protection includes a program's user interface, inventive screen layout and keystroke combinations, and source and object code. The visual screen display element of a computer program's user interface can, at least, be covered by copyright, according to case law about the copyright protection of video games. Even though the federal circuits do not always follow the same rules regarding copyright law, examining a case from another course might nevertheless provide helpful information.

The well-known case supports the idea that a screen display in a user interface may be granted copyright protection as an audiovisual work. *Atari, Inc. v. North American Philips Consumer Electronics Corp.*<sup>18</sup> This case sparked a movement that expanded the range of topics covered by copyright protection. When determining the extent of copyright protection for a Web site user interface, one can rely on the Supreme Court's denial of certiorari, which left the ruling unchanged. The copyright in question, in this case, was the screen-presented copyright in an audiovisual work, not the copyright in the program's source code. The Seventh Circuit considered the similarities of the game characters in both computer games while analysing the significant resemblance of the displays. Defendants made use of "gobblers" and "ghost monsters," two K.C. Munchkin creations that were conceptually and visually comparable to Atari's "Pac-Man." The court determined that the defendant's game accurately reproduced the "whole concept and feel" of Atari's game even though there was no identical replication of the screen displays. The Seventh Circuit court did not mention how far this notion of copyright protection should be extended in this case. Still, it opened the door for protecting the general presentation and "feel" of video game display displays. If the original expression was present in screen displays in other operating environments, it is unclear from the case whether copyright protection would apply.

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<sup>18</sup> Atari, Inc. v. North American Philips Consumer Electronics Corp., 672 F.2d 607 (7th Cir. 1982).

"Registering the *'look and feel of all computer applications became standard'*" shortly after this instance. Copyright is established the moment a work is fixed in a physical medium. Still, it must be registered for the owner to use it to sue someone who violates it and get compensation under the Copyright Act. The Copyright Office, for starters, "authorised registration of visual displays as independent literary works or separate audiovisual works." The Office then decided to permit registration of an underlying computer programme to cover all of the audiovisual screen display components that the programme produced. To determine how to continue with copyrighting and the protection of computer programmes, the Office held public hearings in 1987. The Office later implemented internal policies in 1988 to facilitate single registration for all components of computer programmes, including visual screen displays. However, the precise scope of copyright protection for computer programmes is still unknown. As a result, it is uncertain whether a court will need a single registration for all facets of the computer programme.

While each case must be evaluated uniquely based on its circumstances, drawing generalisations from case law might be challenging. However, it is difficult to predict how far copyright protection will go beyond source and object code and whether it will sufficiently protect the overall look and feel of computer user interfaces. The existing copyright laws are more readily applicable to specific graphic elements in a screen display or user interface. Even after Atari, it is challenging to identify the look and feel of the protection of website user interfaces. Finally, it is unclear whether the look and feel of a computer programme or website user interface may be protected just by the graphic visual screens if the icon buttons are also separately copyrightable, or whether the combination of graphic visual screens and icon buttons is graphical game interface copyright protection is, at best, erratic. This raises many concerns regarding copyright enforcement for online user interfaces for websites.

## Conclusion

Although it will be challenging, protecting a Web site's interface as valuable intellectual property is an essential result of the expanding computer era. Because the notion of protection is narrow, it is evident that not all facets of a Web site interface may be covered by copyright law. User interfaces may not be protected by copyright due to exclusions in the

Copyright Act since they are presumably utilitarian and functional means of operation. Additionally, copyright may not fully cover the overall presentation of a Web site interface, or the appearance and feel of the interface, given the current trend toward less protection for figurative components in computer programmes.

It is feasible that trade dress will be a more effective way to safeguard a website's overall aesthetics and user experience. Trade dress theory may make it challenging to demonstrate distinctiveness, but as customers expect more sophisticated visuals and online interactions, unique interfaces are constantly becoming more complicated. Additionally, unlike copyright law, trademark functionality is not utilitarian-based.

Therefore, even with certain practical aspects present in the layout, a Web site user interface may still benefit from protection. To prevent Web site interfaces from being "*knocked off*" in cyberspace, it is difficult to foresee how a court will apply the trade dress doctrine. However, because Web site user interfaces are so frequently used to distinguish businesses and sell goods in cyberspace, the (*trade dress theory*)<sup>19</sup> of protecting the overall scheme or layout that identifies and differentiates a specific source in the marketplace seems a fitting approach for protecting Web site user interfaces.

The recently passed "*Design (Amendment) Rules 2019*" adopt the most recent Locarno Classification, bringing the law into compliance with WIPO guidelines. This is significant because it introduces the new Class 32 to Indian Design legislation, which aims to protect graphic emblems and trademarks, surface patterns, and ornamentation. The mere introduction of Class 32 is a light of optimism for GUIs, even though this contrasts with the Amazon decision and makes the situation even more dubious.

To clear up the confusion once and for all, a modification to the original legislation would be ideal, but a new interpretation of Sections 2(a) and 2(d), backed by the new Class 32, cannot be ruled out.

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<sup>19</sup> A method of trademark protection is trade dress. The "whole image and general look of a product" are referred to as "trade dress." Alternatively, it is the "method in which the goods or services are presented to prospective consumers..." to identify the source. The phrase "arrangement of identifying traits or adornment related to a product, whether through packaging or otherwise, designed to make the source of the product identifiable from another and to promote it for sale" refers to trade dress. The look or image of the goods and services provided for sale "then operates as a trademark" if source importance is linked to it.

Developers in India are in a pickle since it is unclear whether they should file for protection for their GUIs under the Design Act or the Copyright Act due to a lack of policy clarity and a complete lack of jurisprudence on the subject. It is crucial to realise that design protection has certain intrinsic advantages over copyright protection for GUIs, especially given that global trends favour the latter.

To begin with, copyright protection's range of applications is highly constrained and optional. Icons, windows, transitions, and synergy all contain components previously in the public domain. The court's determination of what constitutes "look and feel" that cannot be protected is frequently unanticipated. It is easy for upcoming developers to get away with copying by carefully avoiding precise imitations, as only exact or nearly exact copying is considered actionable. On the other hand, the design aims to safeguard the GUI's essential aesthetic components, making it marketable.

Furthermore, given the rapid pace of invention in the software business, the copyright term (*the author's life plus sixty years*) is inappropriate for a GUI. Multiple generations pass during the monopoly, and by the time the work is released into the public domain, it is already out of date. Design protection is more in line with the rate of GUI evolution at ten years. From the developers' standpoint, design is also more lucrative since, unlike copyright, it does not include fair dealing exceptions that might reduce the company's profit.

Last but not least, Section 15 of the Copyright Act, which declares that copyright and design law protection are mutually exclusive, also states that copyright in work eligible for design protection will end if the item to which the design is applied is copied more than fifty times through an industrial process. If GUIs are allowed to be registered under the new Class 32 in light of the most recent change to the Design Guidelines, this might be a significant obstacle for businesses. In this scenario, the GUI's mass manufacture will result in the loss of copyright.

Based on the preceding study and GUI's court experience with copyright protection, it may be concluded that design is a more potent instrument for protecting one's rights in GUI than copyright. India struggles with an inadequate GUI strategy as it obtains acceptance in notable jurisdictions across the globe. India has to have a strong protection strategy for GUIs that gives developers a competitive edge and enables them to get early-stage funding from

investors if it wants to promote itself as an investor-friendly country.

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