POTENTIAL OVERLAP BETWEEN DESIGN PROTECTION AND COPYRIGHT PROTECTION FOR GRAPHICAL USER INTERFACE

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ABSTRACT

The protection of Graphical User Interfaces (GUIs) in India presents a complex legal challenge, intersecting various domains of intellectual property law, including copyright, design, and patent law. This paper examines the legal framework for GUI protection under the Designs Act, 2000, and the Copyright Act, 1957, while exploring the possibility of design patent protection. It highlights key legal issues, such as the distinction between the functional coding of GUIs and their ornamental, aesthetic components, which are protected differently. The research identifies a significant legal inconsistency where the Ministry of Electronics and Information Technology (MeitY) asserts that the "look and feel" of GUIs can be protected under copyright, creating potential dual protection. This assertion contradicts Section 15 of the Copyright Act, 1957, which states that designs eligible for registration under the Designs Act cannot be granted protection under the Copyright Act. The paper also explores the challenges presented by the UST Global Ltd. case, which broadened the scope of GUI protection under the Designs Act, and Amazon Technologies' attempt to register a GUI as a design. The study further considers the feasibility of patent protection for GUIs, as seen in global practices, and notes the challenges in distinguishing between functionality and design. Findings indicate that while the aesthetic aspects of GUIs are covered under the Designs Act and the functional aspects (coding) fall under copyright protection, a clearer demarcation between these two types of protection is needed. The research suggests that the interpretation of terms like "judged solely by the eye" and "industrial process" in the Designs Act should be revised to include software-based designs, especially GUIs, which are integral to the functionality and aesthetic appeal of modern technology.

Introduction

The breakthrough in the history of computer science paving way for personal use computers is credited to Douglas Engelbart's pioneering ideas in the 1960s. Engelbart saw computers as tools to augment human intellect, sparking his creation of the oN-Line System. With colleague Bill English, he invented the first computer mouse, introducing the idea of a cursor and direct manipulation of on-screen elements. In 1968, Engelbart presented his visionary work, including multiple windows and word processing, in the groundbreaking "mother of all demos.

Xerox PARC advanced Engelbart's vision, developing the Xerox Alto in 1973, which introduced the "desktop metaphor" with overlapping windows, icons, and a pointer—foundational elements of the WIMP (Windows, Icons, Menus, Pointer) paradigm. The Xerox Star followed in 1981, implementing more interactive features like cut, copy, and paste, and WYSIWYG (What-You-See-Is-What-You-Get) interfaces, though it remained costly and commercially limited[1].

Steve Jobs, inspired by Xerox PARC's research, incorporated GUI concepts into Apple's computers, leading to the release of the Macintosh in 1984, which popularized GUIs. Microsoft soon followed with Windows, solidifying GUIs as the standard in personal computing. This user-centered evolution has shaped modern computing, making technology accessible and intuitive[2].

Background

The rationale behind intellectual property protection is to provide economic incentive to the developer or creator or inventor and to protect the moral rights of them. But certain industries, which rapidly develops like Fasion and technology work well even without the intervention of laws. Inspite of competition issues the market mechanism automatically regulates, rewards and penalises good designs over floppy ones, say a school of thought. This will also improve investments in innovation and creativity. On the other hand, there have been

[1] Pavel Koukal, Collective Administration of Graphical User Interfaces (GUI) in the Light of the BSA Decision, 10 MASARYK U. J.L. & TECH. 128 (Fall 2016).
[2] *What Is GUI? Graphical User Interfaces, Explained*, HubSpot (Sept. 29, 2023), https://blog.hubspot.com/website/what-is-gui.

several debates and questions surrounding the ascription of copyright, patent, trade dress or design protection of GUI, globally.

Literature Review

Medha tandon's paper[3] elaborates protection for industrial designs, its registration process and enforcement mechanisms. It also highlights the aesthetic versus functional elements.

Divyanshi Gautam's paper[4] examines the existing design and copyright laws on protecting GUI. The paper advocates that if GUI registration as design, becomes a settled principle of law, there will be an increase in number of GUI registration resulting in greater protection for the respective companies.

Nikhil Purohit's article[5] examines potential copyright infringement by JioMeet's GUI, initially resembling Zoom's interface. It discusses how copyright law protects the "expression" of a GUI, not the ideas or functionality behind it. While JioMeet's interface was similar to Zoom's, Jio has since redesigned its GUI, making it unique.

Rachel Stigler [6]discusses extensively on the need and extent of protection needed to not disturb the market while providing economic incentive to the creator. He states, "Congress seeks to balance this creator-society trade-off in their copyright, patent, and trademark legislation". The solution to regulate GUI would be a mix of proetctions thereby offering a hybrid protection.

Author Pavel analyses[7] the legal differentiation of graphical user interfaces (GUIs) from computer programs to see whether collective management of GUIs will be effective. The Czech Copyright Act specifies that some rights require compulsory collective management (Article 96), while others allow for voluntary management (Article 98). However, in the BSA case, the

[3] Medha Tandon, *Protection of Industrial Design in India*, Lex Indis Law Offices (2020), available at https://lexindis.com/wp-content/uploads/2020/11/Protection-of-Industrial-Design-in-India.pdf.
[4] Divyanshi Gautam, *Navigating GUI Design Legalities: Design vs. Copyright Laws*, J.P. Assocs. (June 19, 2024), available at https://jpassociates.co.in/navigating-gui-design-legalities-design-vs-copyright-laws/
[5] Nikhil Purohit, *Does JioMeet's GUI Infringe Copyright in Zoom's Software?*, SpicyIP (July 8, 2020), available at https://spicyip.com/2020/07/does-jiomeets-gui-infringe-copyright-in-zooms-software.html.
[6] Rachel Stigler, Ooey GUI: The Messy Protection of Graphical User Interfaces, 12 NW. J. TECH. & INTELL. PROP. 215 (August 2014).
[7] Pavel Koukal, Collective Administration of Graphical User Interfaces (GUI) in the Light of the BSA Decision, 10 MASARYK U. J.L. & TECH. 128 (Fall 2016).

Court of Justice of the European Union (CJEU) examined whether computer programs, such as GUIs, could be broadcast, which highlighted complex legal issues in collectively managing GUIs as audiovisual content. In this context, the collective management of GUIs appears inefficient and unnecessary. The Czech Regional Court ruled that GUIs are functional parts of computer programs, not standalone audiovisual works (Art. 79, Para. 1). Their purpose is to help users operate software, meaning they're meaningful only when paired with the program itself. Attempts to classify GUIs for collective management led to protracted legal proceedings that revealed no practical value in treating them independently for rights management. Thus, the article argues that just as collective administration isn't suitable for programs, it's also ineffective for GUIs due to their inseparable link to software functionality.

Research Problem

Copyright in India extends to literary and artistic works, whereas patent deals with protecting inventions. GUI's ornamental aspects are protected under Designs Act, whereas the coding, which provides the functionality is protected under the Copyrights Act. India does not provide design patents, hence patents protection which is superior to others are unavailable to GUI in India. The issue arises when a design protection, available only upon registration, is sought by creators through Copyright. Adding to this complication is the Meity's clarification in its website stating copyright protection also covers the 'look and feel' offered by a GUI. The Amazon Technologies case highlighted challenges in applying the Designs Act, 2000 to GUIs, with its rejection based on "constant eye appeal" and functional nature. However, the recent UST Global Ltd. case broadened the scope, recognizing GUIs as eligible for design protection. Despite this, there remains a gap in consistent legal interpretation regarding the protection of GUIs under the Designs Act. This research seeks to address this gap and examine the evolving legal framework for GUI protection in India.

Research Methodology

This paper adopts a doctrinal research approach, focusing on the study of existing literature, and judicial decisions. It draws on primary sources, such as the Designs Act, 2000, Copyright Act, 1957 the Designs (Amendment) Rules, 2008, and the Locarno Classification. Further references are made on Czech Copyright Act, 2000, US Patent Law, China Patent Law. Additionally, judicial precedents concerning GUI protection, are referred. The research also

incorporates secondary sources, such as academic journals, articles, research papers, which provide critical insights into design and copyright law, especially in the context of GUI protection.

Research Objective

1. To examine the protection provided to Graphical User Interfaces (GUIs) under the Designs Act, 2000, and to compare this with the protection afforded under the Copyright Act, 1957.

2. To examine the advantages and challenges in providing design patent to GUI.

Research Questions

1. How does the Designs Act, 2000, offer protection for Graphical User Interfaces (GUIs), and how does this compare with the protection granted under the Copyright Act, 1957?

2. Whether design patent provide protection for Graphical User Interface?

Designs Act and GUI

The Designs Act 2000 and the Designs(Amendment) Rules 2008 regulate industrial design law in India. According to section 2(d) of the Designs Act 2000, design means any shape, configuration, pattern, ornament or composition of lines or colours. The designs should be applied to any article by industrial process. In order to register under this Act, the designs have to be new and orginal. The design must be aesthetically appealing to be noticed by the eye and, thus, distinguished. It excludes artistic work under section 2(c) of Copyright Act, 1957.

The application for registration should specify the class number[8] under which the design is be registered. For this, Schedule III of Designs (Amendment) Rules, 2008 will be referred, which contains the list of classes based on the Locarno Agreement. The 13th Edition of Locarno Classification comprises of 32 classes. With the Designs (Amendment) Rules, 2021 a new class 32 relates to 'Graphic symbols and logos, surface patterns and ornamentation' is

[8]Medha Tandon, *Protection of Industrial Design in India*, Lex Indis Law Offices (2020), available at https://lexindis.com/wp-content/uploads/2020/11/Protection-of-Industrial-Design-in-India.pdf.

added.

A **Graphical User Interface (GUI)** is a type of user interface[9] that allows people to interact with electronic devices through graphical elements instead of text-based commands. It includes visual elements like icons, buttons, windows, menus, and other interactive components, organized to make user navigation intuitive and visually appealing.

Amazon's attempt to register GUI as a design

The subject matter of the design, in the application must be covered by section 2(d), which is applied to an 'article' (as defined by section 2(a)), in order for the design to be registered. In the application[10] made by Amazon Technologies, Inc., they filed for a Graphic User Interface as a design, which is applied to the display screen of a handheld computing device as an 'article'.

Amazon's application to register for GUI was rejected[11] by the controller, on the grounds that it failed to satisfy S.2(a) and S.2(d) of the Designs Act. Because, the GUI will show on the display screen only when it is switched on, thereby it does not fulfill 'constant eye appeal', and it is not an integral part of the 'article' but purely functional; and it cannot be sold separately.

In today's highly competitive, tech-driven world, restricting 'continuous eye appeal' to what is visible 24/7 and interpreting 'industrial process' in a way that excludes the software industry[12] stifles innovation and disadvantages India's IT sector.

UST Global Ltd., case on GUI as design

The recent Calcutta High Court decision[13] in UST Global (Singapore) Pte Ltd. vs. The

[9] Divyanshi Gautam, *Navigating GUI Design Legalities: Design vs. Copyright Laws*, J.P. Assocs. (June 19, 2024), available at https://jpassociates.co.in/navigating-gui-design-legalities-design-vs-copyright-laws/
[10] *Graphical User Interface Protection Puts Indian Patent Office in a Fix*, RNA Tech. & IP Att'ys (Nov. 24, 2014), available at https://rnaip.com/graphical-user-interface-protection-puts-indian-patent-office-in-a-fix/.
[11] *Graphical User Interface Protection Puts Indian Patent Office in a Fix*, RNA Tech. & IP Att'ys (Nov. 24, 2014), available at https://rnaip.com/graphical-user-interface-protection-puts-indian-patent-office-in-a-fix/.
[12] Divyanshi Gautam, *Navigating GUI Design Legalities: Design vs. Copyright Laws*, Mondaq (June 24, 2024), available at https://www.mondaq.com/india/copyright/1483070/navigating-gui-design-legalities-design-vs-copyright-laws.
[13] Vikrant Rana & Dhruv Mathur, *A Hope for GUI Registration under Design Laws in India*, Bar & Bench (Mar. 27, 2023), available at https://www.barandbench.com/law-firms/view-point/a-hope-for-gui-registration-under-design-laws-in-india.

Controller of Patents and Designs, offers new prospects for GUI registration as a design in India. The court concluded that GUIs are eligible for protection under Sections 2(a) and 2(d) of the Designs Act, 2000, recognizing their aesthetic and functional significance in products as it falls under class 32 of the Locarno classification. It is emphasized that GUI is also used as a differentiation of products and user experience with the ultimate aim of influencing customer decision when buying such products.

GUI functionality can indeed be achieved without distinctive visual elements; However, the primary appeal of GUI's lies in their unique aesthetic qualities. These graphical components enhance the marketability of devices, as they are applied to computers[14] that falls under "articles" under Section 2(a) of the Designs Act, that can be individually sold. The graphical design of a GUI adds significant market value, making it a vital aspect of the device's overall appeal and user experience.

The process of applying a GUI design to a finished product is both mechanical and manual, fitting the "industrial process" criteria under Section 2(d) of the Designs Act, 2000. Initially, a software developer creates the GUI through source code, which is then embedded within microcontrollers and microprocessors[15] of the device. This embedded code drives the GUI to display on the screen, producing the intended visual interface for user interaction.

Copyright Act and GUI:

The Copyright Act, 1957, protects the rights of authors of a literary, dramatic, musical, artistic, cinematograph and sound recording. Section 2(d)(vi) includes a computer programme, i.e, artistic work which is computer-generated in the definition of author. Further, Section 2(o) defines, "literary work" as including computer programmes, tables and compilations including computer databases. Hence, the definition of computer programme under Section 2(ffc) becomes relevant. It states computer programme is "*a set of instructions expressed in words, codes, schemes or in any other form*". A computer program must be "original" and "recorded", whether in writing or another format, in order for copyright to apply. It is not necessary for the computer program to be creative or distinctive in any way in order to meet the originality

[14]Divyanshi Gautam, *Navigating GUI Design Legalities: Design vs. Copyright Laws*, Mondaq (June 24, 2024), available at https://www.mondaq.com/india/copyright/1483070/navigating-gui-design-legalities-design-vs-copyright-laws.
[15]Amod Kumar et al., *GUI Based Device Controller Using MATLAB*, 4 Int'l J. Sci. & Eng'g Rsch. 903 (June 2013), available at https://www.ijser.org/researchpaper/GUI-Based-Device-Controller-Using-MATLAB.pdf.

requirement, which is not a burdensome one. It just indicates that the author is the creator of the program and that it was the product of a small bit of talent, labor, or effort.

Application of Copyright to GUI's

To see if a GUI is included as a computer programme warranting protection under Copyright Act, let us define a GUI. GUI is the window through which allows the user to access the applications of computers, mobiles, electronic equipments etc. The source code and object code can be protected under the copyright Act. Hence the Act protects the coding of the GUI, which ultimately controls the functional aspects of the computer programme.

Analysis of MeitY's Stance on GUI as Copyrightable

The coding behind a GUI, which enables its functionality, is protected by copyright, offering remedies against infringement. Based on the Locarno Classification (Class 32), GUIs are protected under the Designs Act, focusing on the visual aspects. According to MeitY's statement[16], since computer programs are considered literary works under the Copyright Act, the GUI's design can also be safeguarded through copyright protection.

Feasibility of patent protection to GUI

Now designers in USA are getting 'design patent' protection for their GUI's. However India does not offer patent protection for GUI. A patent protection is superior to copyright protection as

a. it's infringement cannot be defended as 'fair use' and because ideas can also be protected under patent. Hence no development can be done by third parties using the patented design.

b. Its protection, though for a limited time (14 years in USA) is of wider amplitude

c. Greater damages can be sought for an infringement of a patent

[16] Copyright, Ministry of Elecs. & Info. Tech., Govt. of India, available at https://www.meity.gov.in/content/copyright.

Therefore, in USA modern designers of graphical user interfaces, or GUIs, have obtained design patent protection for creative computer software displays. Author Michael Risch, suggests that the protection comes with some difficulties like figuring out the distinction between functionality and creativity. Further, he states that there are following limitations challenges of patent protection for GUI:

a. Firstly, problem arises in the distinction of Function vs. Design: Patents are intended to protect the ornamental (aesthetic) design of a GUI, not its functional aspects. However, both these aspects are so merged together that their distinction is difficult especially given the limitations of the Patent office.

b. Secondly the nature of GUI design opens a limited scope for novelty and innovation. The rationale behind patent protection caters to physical products, whose functional aspects are primary to its protection. Whereas functional aspects of GUIs cannot vary much.

c. The field of technology is dynamic, competitive and rapidly changing and technical. The aesthetic aspects, separately dealt with apart from functionality is not practically feasible.

d. Vague and Subjective Standards for determining whether GUI elements are functional or merely ornamental. This will lead to a system lacking objectivity and therefore violate rule of law.

Hence protection of GUI by providing design patent will stifle competition, hinder competition, lead to monopolies, raise competition issues and will be a negative influence on an enabling business environment as companies might avoid innovating in interface design due to fear of infringement, which limits the industry's growth.

China- Case of struggle for proving copyright infringement and subsequent amendment of law.

China’s IT sector is rapidly advancing, with the country having indigenous apps for almost all

the internet needs of the country. Chinese internet companies Tencent and NetEase[17] fought a legal war where there were allegations of intellectual property (IP) infringement concerning their mobile news applications. NetEase claimed that Tencent's similar app violated their IP assets as it had allegedly copied key features of its own major news app, GUIs and other aspects of the app's design and functionality. It argued that these elements are often central to user engagement in news applications, where the layout, interface, and user experience (UX) design are crucial to attracting and retaining users. However, proving functional infringement proved to be difficult for Netease. This case ultimately led to the amendment of patent examination guide- book regarding the patentability of GUI in China. Now, China offers design patent for GUI limited to non funtional and ornamental portions of GUI.

Finding:

1. The aesthetic aspects of GUIs are protected under the Designs Act. According to MeitY, these aspects can also be protected under the Copyright Act, resulting in dual protection. However, this contradicts Section 15 of the Copyright Act, 1957, which stipulates that any design eligible for registration under the Designs Act cannot be granted protection under the Copyright Act. Therefore, MeitY's statement granting protection to the look and feel of GUIs under the Copyright Act contains a legal inconsistency.

2. The functional aspects of GUIs i.e the coding falls under copyright protection, while the aesthetic elements i.e the look and feel of GUIs are covered under Designs Act, 2000 be demarcated clearly.

Scope and Limitation of Study

1. The research focuses on the protection of Graphical User Interfaces (GUIs) in India, specifically under the Designs Act, 2000 and the Copyright Act, 1957 and explores the dual protection issue.

2. The research did not address the technological and economic impacts of these legal provisions on the Indian IT sector, as it focuses more on the legal interpretation of GUI

[17] *Tencent Inc. v. Qihoo 360 Technology Co.*, No. (2014) Min Shen Zi No. 1891, Supreme People's Ct. (China Dec. 23, 2014).

protection.

3. The laws of other countries are not extensively reviewed.

Recommendations

1. Clear guidelines should be issued to prevent overlap and confusion regarding what constitutes a design eligible for registration under the Designs Act and what can be protected as a literary or artistic work under the Copyright Act.

2. The interpretation of "judged solely by the eye" and "industrial process" should be revised to include software-based designs, especially GUIs, which are integral to the functionality and aesthetic appeal of modern tech products. This would help ensure that software and digital interfaces are not excluded from design protection simply because they don't fit traditional definitions.

Conclusion

In today's competitive tech world, the protection of **Graphical User Interfaces (GUIs)** lacks a definitive legal framework, with varying approaches in different countries. Courts globally face challenges in classifying GUIs, distinguishing between their **coding**, **ornamental design**, and whether they qualify as **literary**, **artistic**, or **audiovisual works**. By establishing clearer protection for GUIs, India can better support its **software industry**, fostering **innovation** and providing **legal certainty** to creators in the digital design space. This would help align India with global standards and encourage creativity.