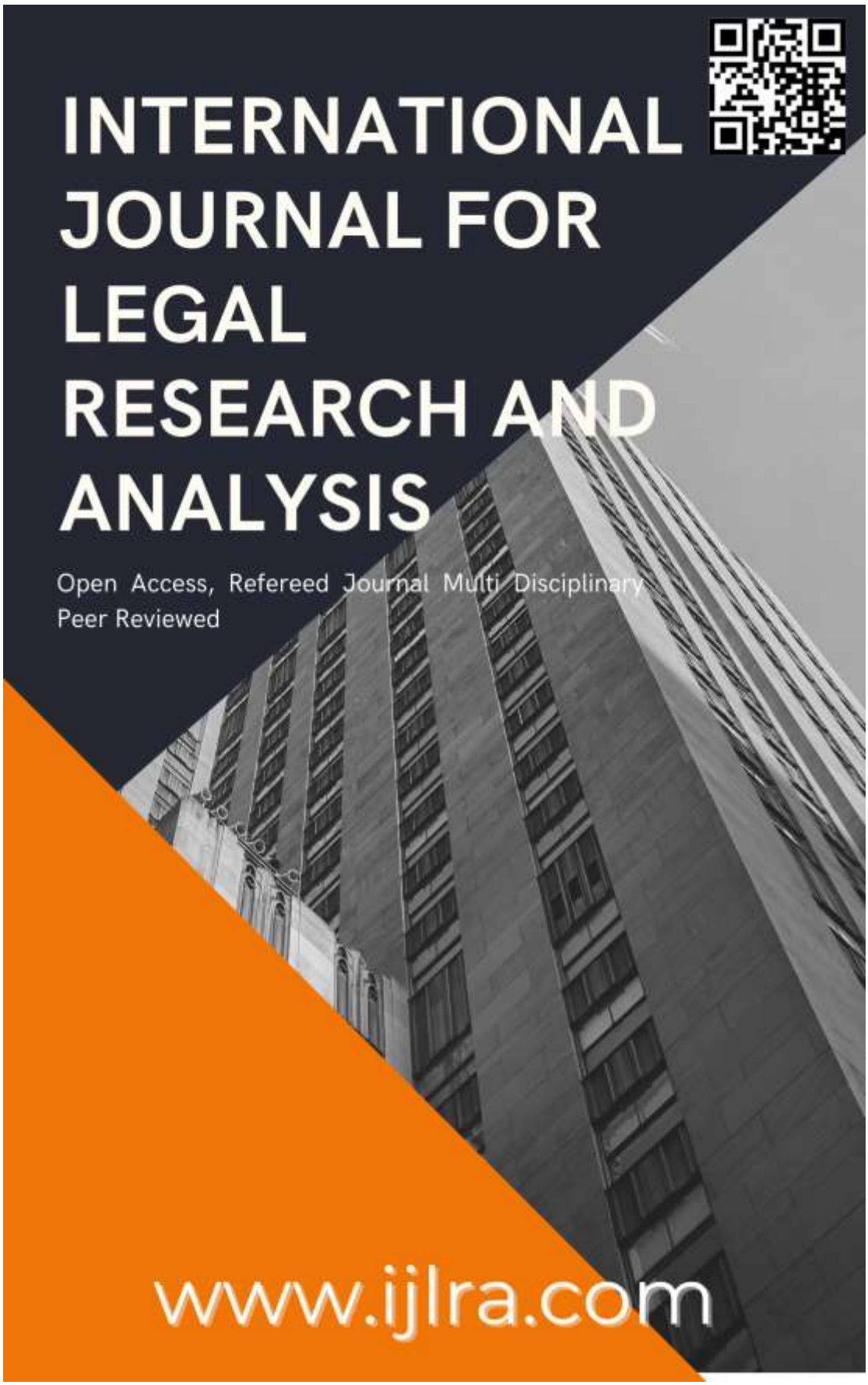

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RESEARCH ARTICLE

Design Law And The Digital Game: An Analysis Of Legal Protection For Graphical User Interfaces And In-Game Visual Elements

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ABSTRACT:

The rise of digital video games has contributed to the increased significance of graphical user interfaces (GUIs), menus, heads-up displays (HUDs), character skins, animated graphics and other interactive elements. While these aspects contain substantial creative and commercial value, the question as to whether they could be protected under Indian design law is far from being resolved. This is particularly the case if they include software-driven, interactive, dynamic elements, or are purely virtual digital images.

This study explores whether the Designs Act, 2000 and the Designs Rules, 2001 provide sufficient statutory basis for protecting such elements. It analyzes the statutory definitions of "article" and "design", the requirement that a design must be applied to an article, and the conditions of graphical representation and visual appeal. Furthermore, the study considers the judicial precedent of UST Global (Singapore) PVT. Ltd. v. Controller of Patents and Designs and NEC Corporation v. Controller of Patents and Designs and evaluates whether the Indian design framework is suitable for protecting animated GUIs, variable HUDs and other virtual elements.

Section 15(2) of the Copyright Act, 1957 and the potential implications for visual assets reproduced and distributed through digital games are also considered. The study analyzes the design patent system in the United States and the registered design framework in the European Union to identify best practices. It develops a set of legislative and regulatory proposals aimed at clarifying the scope of design protection for video game graphical interfaces. The study suggests amendments to Indian design law as well as to the format and requirements for design applications for such graphical elements to ensure that the protection regime remains technologically up-to-date. In particular, it focuses on classification of such designs, representation rules, filing formats and the boundaries between design, copyright and patent protection.

KEYWORDS:

Graphical user interfaces (GUIs), Digital video games, Heads-up displays (HUDs), Indian Designs Act,2000, Article of manufacture, UST Global v. Controller of Patents, Visual assets protection, Virtual design protection, Design patent comparison, Copyright Act Sec.15(2).

INTRODUCTION:

Video games have become a significant part of the global creative industry. Not only gameplay contributes to the game's success — graphical user interface (GUI), menus, heads-up displays (HUD), inventory, skinnable icons, and characters'skins are also important and can be valuable assets for their owners and designers, providing the essential competitive advantage.

The Designs Act, 2000 covers "anything or any part of anything…which is in the form of any shape, configuration, pattern, ornament or construction, or composition of lines or colours, or combination of any of them" applied to an article, judged only on visual perception.1 However, most graphical elements common for video games are created with software and constantly updated in real-time while being dependent on user input or existing independently. Statutory definitions of an "article" and "design" and the

Design Rules, 2001 do not clearly define such graphical elements and animation as video game GUI2. Although some Indian court cases, including UST Global (Singapore) Pte. Ltd. v. Controller of Patents and Designs3 and NEC Corporation v. Controller of Patents and Designs4 have ruled out the possibility of registering GUI, the matter of protecting animated graphical user interface, constantly updated HUD, animated GUI elements, and purely virtual elements requires further consideration.

Meanwhile, according to Section 15(2) of the Copyright Act, 1957, if a design, which can be registered under the Designs Act, has been industrially applied more than fifty times, its copyright is not protected5. Therefore, there is a possibility of a conflict between copyright and design protection for video game GUI elements. The legislation of the United States and the European Union possesses relevant examples and ways of handling similar issues, which may be considered by India for improvement.

1 The Designs Act, 2000 2 Design Rules, 2001 3 UST Global (Singapore) Pte. Ltd. v. Controller of Patents and Designs. 2023 SCC OnLine Cal 1234 4 NEC Corporation v. Controller of Patents and Designs, 2026 SCC OnLine Cal 567 5 Section 15(2) of the Copyright Act, 1957

This paper aims to investigate whether the design legislation of India sufficiently protects video game graphical elements and, if not, suggest amendments and identify issues that should be addressed while distinguishing between design, copyright, and patent protection.

STATEMENT OF PROBLEM :

The Designs Act, 2000 and the Designs Rules, 2001 were primarily drafted in relation to designs incorporated in articles. At the same time, in-game graphical user interface elements are software-intensive, interactive and often ephemeral or even entirely virtual. This raises questions about the very nature of an article, applicability of a design to it, ways of representation of designs and even the application of the statutory “solely by the eye” test.

While Indian courts have tackled the issue of registerability of GUIs, it is unclear to what extent these judicial actions cover animated and dynamic in-game graphical user interface elements. Furthermore, Section 15(2) of the Copyright Act, 1957 adds to the complexity of the situation and the very nature of industrial reproduction of such graphical user interface elements.

These inconsistencies may leave game developers in a state of limbo in relation to their intellectual property rights. On the other hand, overly broad designs may hinder competition by creating a set of design elements that are exclusively controlled by a single entity. The fundamental issue, thus, emerges in connection with the capacity of the current Indian legal framework to adequately protect modern in-game graphical elements without overreaching in relation to the concept of design and encroaching on the domain of copyright.

RESEARCH QUESTIONS:

1. To what extent does the Designs Act, 2000 protect dynamic and interactive video game visuals, and what reforms are needed to align Indian law with international standards?

2. How do the definitions of "article" and "design" under Sections 2(a) and 2(d) apply to virtual gaming interfaces, and are the decisions in UST Global and NEC Corporation sufficient to protect them?

SCOPE AND LIMITATION:

SCOPE: The study focuses on Indian design law, particularly the Designs Act, 2000 and the Designs Rules, 2001, alongside the relevant provisions of the Copyright Act, 1957, especially Section 15. It examines the protection of GUIs, menus, HUDs, character skins, animated visual

elements, and similar in-game graphics. The United States and European Union frameworks are considered for comparative analysis.

LIMITATIONS: Indian case law specifically addressing in-game visual elements is limited. Therefore, the study relies on existing decisions concerning GUIs to understand their possible application to gaming visuals. Patent law, trademark law, trade dress, and passing off are considered only to clarify the boundaries of design protection. The study excludes game mechanics, source code, and audio, and its comparative analysis is restricted to the United States and the European Union. It also acknowledges that the implementation of recent European Union design law reforms is ongoing.

RESEARCH METHODOLOGY:

This study adopts a doctrinal research methodology to examine the legal protection of graphical user interfaces and in-game visual elements under Indian design law. It analyses relevant statutory provisions, judicial decisions, legal literature, and international legal frameworks to identify gaps in the existing law and suggest suitable reforms for protecting dynamic and interactive game designs.

LITERATURE REVIEW:

1. Virtual Designs (Du Mont & Janis, 17 Stan. Tech. L. Rev. 107, 2013)6

Du Mont and Janis discuss the protection of GUIs, icons and virtual designs under US design patent law, and claim that by applying key principles such as surface ornamentation and broken line practice, small administrative changes can be made to accommodate virtual images. An empirical analysis of granted US virtual-design patents (up to 2012) shows that these applications are subject to a more rigorous examination than standard design patents, but lead to a similar quality in terms of citation metrics, and that static and animated designs are treated in a similar time.

Research Gap: The study is limited to the American legal system and based on information prior to 2013, and does not consider whether non-US statutory standards, such as India's Designs Act, 2000—which explicitly requires that a design be applied to a physical "article" by an industrial process—might protect virtual, animated, or interactive visual designs.

6 Du Mont, K., & Janis, M. D. (2013). Virtual Designs. Stanford Technology Law Review, 17, 107

2. Damghani and Ansari (2024), "Intellectual Property Protection for Graphical User Interfaces", Journal of Legal Research7

The authors examine GUI protection across major jurisdictions and explain how classification and examination practices have helped some countries accommodate screen displays. They also identify uncertainty in India's approach to GUI registration.

Research gap: Their study does not sufficiently examine dynamic HUDs, animated sequences, virtual game assets, or Section 15(2) of the CopyrightAct, 1957. The present research addresses these issues in the gaming context

3. Kumar and Sindhwani (2022), "The Overlap between Copyright and Designs in India, EU and the UK: A Case for Overhaul of the Indian Legal Framework", International In-House Counsel Journal8

The authors examine the relationship between copyright and design protection, particularly Section 15 of the Copyright Act, 1957. They identify problems arising from the possible loss of copyright in industrially reproduced designs and argue for reform. Related work by Swarup and Rastogi (2021) also examines the overlap, particularly in traditional industries.

Research gap: Existing discussions largely concern physical products. They do not adequately explain how the fifty-reproduction threshold and industrial-process requirement apply to mass- distributed games and software-generated visuals.

4. Grosheide, Roerdink and Thomas (2014), "Intellectual Property Protection for Video Games: A View from the European Union", Journal of International Commercial Law and Technology9

The authors explain that video games receive protection through several intellectual property regimes, including copyright, trademarks, database rights, and designs. Related work by Bonadio and Trapova (2024) and Abrams et al. (2013) also highlights the multiple intellectual property interests involved in video games.

7 Damghani, A., & Ansari, M. (2024). Intellectual Property Protection for Graphical User Interfaces. Journal of Legal Research. 8 Kumar, A., & Sindhwani, R. (2022). The Overlap between Copyright and Designs in India, EU and the UK: A Case for Overhaul of the Indian Legal Framework. International In-House Counsel Journal. 9 Grosheide, F., Roerdink, H., & Thomas, K. (2014). Intellectual Property Protection for Video Games: A View from the European Union. Journal of International Commercial Law and Technology.

Research gap: This literature does not fully address the difficulties faced by India in adapting its design law to digital and dynamic visuals.

5. Risch (2013), "Functionality and Graphical User Interface Design Patents", Stanford Technology Law Review10

Risch analyses the difficulty of distinguishing ornamental GUI features from functional elements. He warns that granting exclusive rights over necessary interface features may restrict competition and innovation.

Research gap: The study focuses on United States law. The present research considers how these concerns can be addressed under the Indian Designs Act, 2000 through appropriate legal safeguards.

ANALYSIS:

1. From blanket refusal to case-by-case registrability: The Controller has denied GUI applications under Sections 2(a) and 2(d) on the ground that an article means a manufactured item or a separable salable part and a design must be applied to it by an industrial process and appeal to the eye11. In UST Global Pte Ltd v Controller of Patents and Designs (Calcutta High Court, 20 March 2023), the Controller refused to register a "Touch Screen" GUI because a GUI is not capable of registration, because it only appears when the device is switched on and because it is a product of software development rather than industrial manufacture. The Court reversed the refusal. It decided that a design could be applied to either internal or external features of an article, that a two-dimensional GUI could be judged by the eye when the device is on, and that embedding the software in the hardware is an industrial process.

The Controller again refused the application on 6 July 2023 and remitted it. NEC Corporation v Controller of Patents and Designs (Calcutta High Court, 9 March 2026) was heard with four other appeals, and went further.

Justice Kapur held that there is no per se exclusion of GUIs and the design need not be the article itself as the display screen of a device may be the article12. He said that one does not need permanent visibility, depending on the noticeability test in the Manual of Designs Practice and Procedure, and that the Controller confused the functional operation of a GUI with its

10 Risch, M. (2013). Functionality and Graphical User Interface Design Patents. Stanford Technology Law Review. 11 Designs Act, 2000 (Act No. 16 of 2000), Sections 2(a), 2(d), 4 12 https://www.lexology.com/library/detail.aspx?g=6d56ab41-395a-4c17-a97f-a63747a4e3dd

ornamental appearance13. The Court also indicated that the Locarno class has been adopted for screen displays and icons in the Design (Amendment) Rules, which demonstrates an intention to admit such

subject matter. The applications were remitted and the Court requested guidance from the legislature or the Controller in relation to GUIs, icons and animations.

These decisions only partially answer the second research question asked by the paper. Both remanded the applications instead of registering designs. Both emanate from a single High Court. Neither dealt with a video game. But they eliminate a categorical bar. They are therefore applied to the visual aspects of games by analogy and four problems remain.

2. HUDs that are animated and dynamic: Present practice accepts only static representations. GUI sequences are not protectable as moving designs, video files are not accepted and only those features shown in the images are protected and not movement or transition," one Indian law practitioner surveyed said.

Thus, an animated menu, or a HUD containing elements that change depending on the player state, can be represented only as a sequence of static views. That splits the right and raises the question whether the series reveals one design or several. The "solely by the eye" test also breaks down miserably when the visual interest is in motion.

3. Virtual Items NEC considers the display as the article, which is good for two-dimensional menus and overlays: It is in the race for a character skin. A character skin is inscribed in a three dimensional environment, and has no separate physical embodiment .

Such skins and cosmetic items are better understood as artistic works, which are already outside the definition of design under Section 2(d). Thus, a practical demarcation for games is between interface layout, which is a candidate for design registration, and character and environment art, which is the province of copyright. The boundary has yet to be set out in the Act or in the case law.

4. Functionality and previous disclosure: NEC excludes a GUI only when its look is defined solely by function. That is a valid test but it is of little help where genre conventions drive convergence, like the placement of minimaps, health bars and inventory grids.

13 Graphical User Interfaces (GUIs) Qualify for Design Registration Under the Designs Act: Calcutta High Court – Vaish Associates Advocates. https://www.vaishlaw.com/graphical-user-interfaces-guis-qualify-fordesign-registration-under-the-designs-act/. Accessed 12 Oct. 2026

In the absence of examples or guidance, a registration can be allowed for conventions and canceled later. Separately, games are often shown in trailers and beta releases before any filing, and Section 414 bars registration of a design that was disclosed before the filing date. The Act does not provide a general grace period for the proprietor's own disclosures.

5. Overlapping of Copyright and Section 15(2): Section 15(1) excludes copyright from a registered design15. Section 15(2) terminates copyright in a registrable but unregistered design where articles to which it is applied have been reproduced more than fifty times by an industrial process.16

In Microfibers Inc v Girdhar & Co, the Delhi High Court applied Section 15(2) to deny copyright in industrially reproduced designs but preserve copyright in the underlying original artistic work17. NEC explained the overlap with reference to the exclusion of artistic works in Section 2(d) in conjunction with Section 15. And now GUIs can be registered in principle. The risk is that an unregistered interface copied across millions of installations loses copyright. Whether a digital download is a reproduction of a "article" by a "industrial process" remains untested, but a developer cannot safely assume that it is not.

The converse is illustrated in Hulm Entertainment v Fantasy Sports (Delhi High Court, 17 October 2023). The Court considered a GUI as a combination of a computer program, graphic elements and text and found that unless copyright in a particular artistic or literary element was pled no copyright could be claimed in the GUI as such18. A developer who depends on the overall look and feel of an interface may therefore find

that neither regime protects it. For the layout design, registration is the better way to go, for the art copyright is, and both have to be planned together.

6. Lessons from comparison the United States: The ornamental design for an article of manufacture as shown and described. 35 U.S.C. § 17119. In Ex parte Strijland (1992), computer- generated icons were considered to be eligible subject matter20. The drawing must depict the display screen or device in solid or broken lines with a statement that the broken lines are not part of the claimed design (USPTO practice, MPEP § 1504.01(a)21). A series of figures are

14 Designs Act, 2000, Sec. 4. 15 Copyright Act, 1957 (Act No. 14 of 1957), Section 15(1) 16 Copyright Act, 1957 (Act No. 14 of 1957), Section 15(2) 17 Microfibers Inc. v. Girdhar & Co. 2009 SCC OnLine Del 164 18 Hulm Entertainment Pvt. Ltd. v. Fantasy Sports MyFab11 Pvt. Ltd. 2023 SCC OnLine Del 6589 19 United States Patent and Trademark Office (USPTO) 35 U.S.C. § 171 20 26 U.S.P.Q.2d (BNA) 1259 (B.P.A.I. 1992) 21 Manual of Patent Examining Procedure (MPEP) § 1504.01(a)

claimed to be animated with a descriptive statement, and guidance issued in March 2026 extends the approach to projected interfaces, such as holograms.

The lesson is that a drawing convention can satisfy the "article" requirement without amending the statute, which is effectively what the Calcutta decisions adopt. Du Mont and Janis found that the scrutiny of such virtual designs is more stringent than that of ordinary design patents without any diminution of quality. The limitation is that the US still needs embodiment in a display, so purely virtual worlds are still in the air.

7. The European Union: Lessons in comparison. Regulation (EU) No 2024/282222 and Directive (EU) No 2024/2823 came into force on 8 December 2024 . The Directive defines a design as the movement, transition or other animation of its features, and defines a product as any industrial or handicraft item other than a computer program, whether physical or non- physical.23 Most provisions of the Regulation will apply from 1 May 2025, a new representation regime will apply from 1 July 2026 and the Member States have to transpose the Directive by 9 December 2027. The EU has thus legislated what the Indian courts are inferring, and it keeps computer programs out of design law so as to protect the boundary with software copyright. The limitation of this study is the implementation in ongoing.

8. India's reform pipeline: A Concept Note from the Department for Promotion of Industry and Internal Trade proposes to extend design protection to GUIs, virtual designs, icons and animated characters, in line with the Riyadh Design Law Treaty.24 It also recommends that Section 15(2) be amended so that registrable but unregistered designs should be entitled to copyright for 15 years. Commentators observe that a fifteen year unregistered right is equivalent to the maximum registered term which could eliminate the incentive to register and that the start date is undefined. Draft guidelines for GUI and icon designs were published on 1 October 2026 and are available for consultation. Guidelines can better the titles, classification and examination of functionality but cannot amend the definitions in Section 2 or Section 15(2). NEC itself recognized this by inviting action from either the legislature or the Controller.

RECOMMENDATIONS:

1. Amend the Definitions: Section 2(a) should cover a virtual product including a graphical interface, icon or display shown on an electronic display and Section 2(d) should provide that

22 Regulation (EU) 2024/2822 of the European Parliament and of the Council 23 Directive (EU) 2024/2823 of the European Parliament and of the Council 24 Draft Guidelines for Registration of Graphical User Interfaces (GUIs) and Icons (Published October 1, 2026)

a design includes the appearance resulting from movement, transition or animation. They should not include computer programs and mere mechanical devices, as they are in the EU.

2. Finalize the Draft Guidelines with game specific content: The final guidelines should clearly include game visuals. They should follow the US display-screen convention, with broken-line disclaimers and titles such as “display screen with graphical user interface”. They should regard the changing states of a HUD as different perspectives on the same design, and apply the Locarno class consistently for screen displays and icons.

3. Reforming representation: The Designs Rules, 2001 should maintain a series of static views as the baseline, with an optional short video showing an animation. The protection should be defined by the static views which preserve compatibility with priority filings abroad. The rule should be reviewed after a year of the new regime in the EU.

4. Codify the limit of functionality: The guidelines should be based on the NEC test except in cases where the design is dictated by function alone. They should offer worked examples of standardized icons and genre conventions, and through part designs and disclaimers make claims to specific features, so that rivals are free to develop interfaces that serve the same purpose.

5. To clarify section 15(2) as not extending it: Section 15(2) should clarify that digital reproduction or distribution is not industrial application and that copyright in original character and environment art is not affected. If an unregistered design right is to be introduced, it should be shorter than the registered term, like the three-year unregistered design right in the EU, with a clear start date at first publication. This maintains the incentive to sign up.

6.Allow a grace period: Section 4 should provide for a 12 month grace period for the proprietor’s own disclosure, as in the US and EU, and the deferred publication proposed in the Concept Note should be adopted for game launches (subject to protection of innocent third parties). 7. Build capacity use layered protection: The Design Office should train examiners, publish reasoned decisions on game-related applications and review the framework within three years. Developers should seek interface layouts, register copyright for certain artistic works and use trademark and passing-off protection for unique branding.

CONCLUSION:

The Designs Act, 2000 was enacted for objects and offers an uncertain and possibly inadequate protection for animated and interactive visuals in games. Existing gaps include the need for an article, the rules for static representation, the unresolvable functionality line and the Section 15(2) trap, all of which deprive developers of reliable rights. The United States and the European Union demonstrate that protection for virtual designs can be achieved through targeted definitional and procedural change without abandoning the core logic of design law. The reforms discussed here would bring Indian law in line with that approach and shield competition with the functionality safeguard. Courts will be the first to confront these disputes, but a statutory solution will provide the game industry with the certainty that case-by-case adjudication cannot.