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As industrial designs move to the virtual environment, laws and practices around the globe are changing

The rise of computing and digital technologies has accelerated growth in a class of innovative products whose visual design cannot be expressed purely through physical shapes or forms, historically the subject of industrial design protections. The design elements emanating from the implementation of software and computer electronics products, which began as visual images on computer screens, have evolved into graphical user faces which then advanced into projections, holographic imagery, and virtual/augmented reality—none of which require or use physical display. In response, laws protecting industrial designs have been changing rapidly. And as design innovation and business increasingly move from the factory floor to the virtual world, countries are moving forward to ensure that all innovative designs are capable of protection.

Over the past five years, many of the world's most innovative economies have revised and modernized their design laws and practices to account for the evolution toward digital designs and digital economies. They are doing so to ensure that design innovations in these new technology environments can be better protected under their industrial design protection systems. Here are some notable recent developments in industrial design law and practice in eight economies across the globe.

Canada: In 2017, while Canada was in the midst of overhauling and modernizing its industrial design system in preparation for joining [The Hague Agreement Concerning the International Registration of Industrial Designs](#), it adopted an important change to the examination of computer-generated animated designs. Previously, the Canadian Intellectual Property Office (CIPO) examined icons and computer interfaces as static designs applied to a finished article. This meant, for example, that each frame of the animation was examined as an individual design. This required a large number of design applications for a single animated design and drove up costs for applicants. CIPO now recognizes that a sequence of coordinated graphics creates a unique and dynamic visual effect, and that this is subject matter appropriately protectable by design rights.

China: Until recently, China's practice regarding GUIs and digital designs had been limited. In order to obtain industrial design protection for an icon or GUI, the applicant had to claim the entire physical product—that is, the look of the entire computer, tablet, mobile device, etc.—in addition to the digital design itself. In 2019, in a significant shift in interpretation to accommodate GUI designs, the China National Intellectual Property Administration (CNIPA) released updated patent examination guidelines indicating that the whole product may be limited to the display screen. Additionally, in 2021, China updated its design patent regulations to specifically protect partial designs, potentially removing the requirement for a display screen entirely. While it is too early to know how expansively CNIPA will implement these changes, for global designers these are major steps forward in the direction of providing protection of future innovative designs.

European Union: The European Union (EU) is recognized for having one of the most flexible systems for applicants with regard to filing and eligibility requirements for industrial designs. Design protection in the EU covers a broad scope of subject matter, including the visual elements of a computer program, graphical designs, computer-generated images, and even intangible visual designs, so long as the design represents the appearance of a product. Graphic designs, including GUIs, are eligible for design registration in the EU to the extent that the design represents the appearance of a product.

While the EU has traditionally provided broad protections, the European Commission (EC) has been engaged in several studies and consultations over the last few years with the goal of revising EU legislation on design protection. In particular, the Commission is looking to clarify protections for virtual designs, including GUIs and animated designs.

Israel: After several years of discussions on the potential modernization of design protections under Israeli law, in 2018 Israel's New Designs Act came into effect. The new law uses the term "products" to identify the subject matter for protection, rather than "articles" as under the old law. The term "product" is intended to be more inclusive and specifically defines products to include, among other things, a screen display and a graphic symbol. This definition means that GUIs themselves are now protectable as designs under the new law insofar as they may be categorized as a "screen display" or as a "graphic symbol."

Japan: Japan has historically required designs to be directed to an article or product. In 2019, the Cabinet passed a reform bill revising Japan's Design Act. It expands the definition of "design" to specifically include digital images that are not recorded in, or displayed on, an article, such as graphic designs viewed or provided through a computer network and projected images. The revised law now provides Japan's rights holders

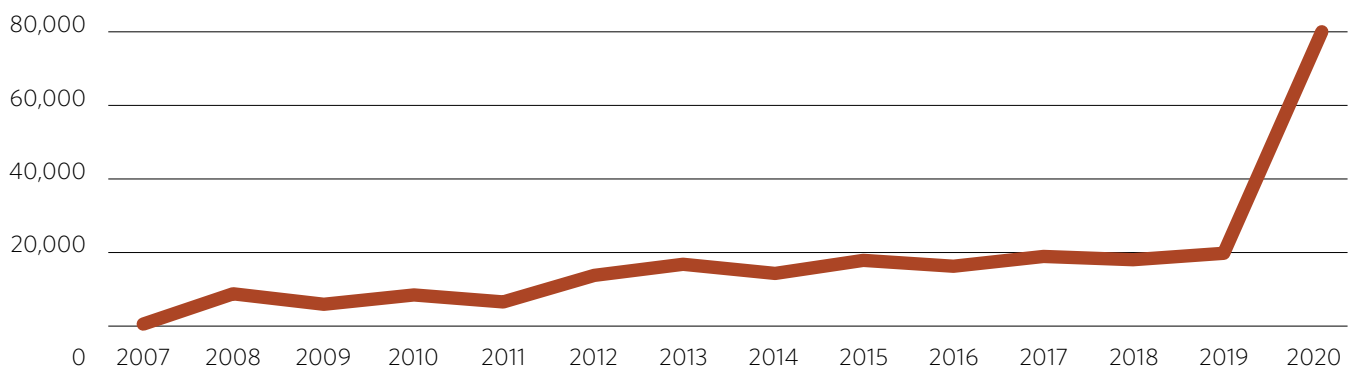
with protection for on-screen images and those appearing through virtual and augmented reality, without the need to be part of a physical product or article.

Korea: In October 2021 Korea implemented new amendments to its Design Protection Act. The amendments addressed the protection of functional projected image designs such as holograms, augmented reality, and projected displays by redefining the term "design." Korea's industrial design protection system now accommodates functional designs, without the requirement for showing the underlying product. Specifically, the amendments to Article 2 of the revised Act included the insertion of the term "graphic image" into the text, defining it as "geometry or symbols (limited to those used to operate the device or displayed as a result of the device performing its function) expressed by digital technology or in electronic means."

Singapore: In 2018, in response to public comments, Singapore revamped its design registration requirements for GUI designs. Notably, it eliminated the requirement for a design to be applied to an article through an industrial process. Singapore's law now provides protection for both non-animated and animated GUI designs that are applied to an article or a non-physical product. The Registered Design Act requires that a GUI contain features of shape, configuration, colors, pattern, or ornament, and that the application of the GUI to an article or non-physical product produces its appearance. A "non-physical product" is defined to mean "anything that (a) does not have a physical form; (b) is produced by the projection of a design on a surface or into a medium (including air); and (c) has an intrinsic utilitarian function that is not merely to portray the appearance of the thing or to convey information." Thus, Singapore's modernized legislation provides protection for a broader scope of designs that encompasses new and emerging technologies by eliminating the requirement that the design be applied to a physical product.

Worldwide, the number of filings for digital designs has been growing

Industrial design filings in Locarno Class 14, 2007-2020



Source: World Intellectual Property Organization. Data represent filings in Locarno Class 14, which includes recording, telecommunication, and data processing designs. Digital designs are incorporated into this classification.

United States: The United States Patent and Trademark Office (USPTO) has been exploring current practice regarding the protection of digital designs. In 2016, efforts to understand digital protections around the world began at the World Intellectual Property Organization (WIPO) when the United States and Japan led a study on the topic. The United States continues to promote this topic through WIPO with many additional international partners.

To better evaluate the needs of and challenges to U.S. designers, in December 2020 the USPTO published a [Request for Information](#) in the Federal Register, inviting the public to comment on “whether [the USPTO’s] interpretation of the article of manufacture requirement in the United States Code should be revised to protect digital designs that encompass new and emerging technologies.” In 2022, the USPTO published [a summary of the public views on this issue](#) and has begun reviewing its “Guidelines for Examination of Design Patent Applications for Computer-Generated Icons” and the surrounding law.

Additional international initiatives and discussions

Other countries are also considering changes to their design practices to accommodate digital and virtual designs. For example, Australia has indicated in its official policy register that the consideration of virtual and non-physical products is a high-priority initiative. Likewise, Malaysia recently published amendments for public comment that include protections for non-physical products.

Discussions on this topic are also being pursued at various international IP organizations and forums, including:

World Intellectual Property Organization (WIPO), through its Standing Committee on Trademarks, Industrial Designs, and Graphical Indications (SCT): In 2021, an updated [proposal for a Joint Recommendation on industrial design protection for designs for graphical user interfaces](#) sponsored by Canada, Israel, Japan, the Republic of Korea, the United Kingdom, the United States, and the European Union was submitted to this international body and gained further support when considered in 2022.

ID5: In 2016, this forum of the world’s five largest intellectual property offices published [a study](#) of practices on the protection of new technological designs. [Another ID5 report](#), published that same year, was a comparative study of partial designs as an effective means of protection for industrial design innovation.

This report was prepared by the USPTO’s Office of Policy and International Affairs. For information on the USPTO’s engagement with the ID5 and other international bodies that deal with intellectual property (IP) and IP policy, visit the [USPTO’s IP Policy webpage](#). To keep informed about the latest development in IP policy at the USPTO, subscribe to receive [IP Policy and International Affairs Alerts](#) by email.

Design law in the United States and overseas

Links to additional information on design protections in eight major world jurisdictions

Country	Resource/website
Canada	Canadian Intellectual Property Office: Practice notice: Application for protection of computer-generated animated designs
China	China National Intellectual Property Administration: Revised law to come into effect in 2021
European Union	European Commission: Evaluation of EU legislation on design protection
Israel	Israel Patent Office: Designs Legislation
Japan	Japan Patent Attorneys Association: Design overview
Korea	Text of Design Protection Act
Singapore	Text of revised Registered Designs Act
United States	U.S. Patent and Trademark Office: Report on public views of the article of manufacture requirement of 35 U.S.C. § 171