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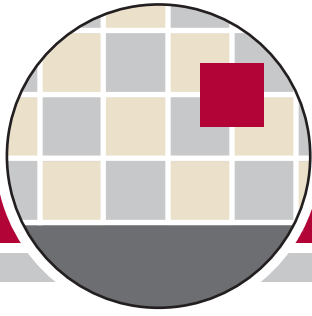
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“Advancing with the Times: Industrial Design Protection in the Era of Virtual Migration”

Horacio E. Gutiérrez*

Introduction[†]

I want to begin by thanking Tsinghua University, and Professors Wang Bing and Li Xiaowu, for their vision and leadership to dedicate this year’s conference to the issue of Industrial Design Protection for Graphical User Interfaces of Electronic Products. This conference convenes some of the most recognized international experts on this issue, including senior officials from SIPO, MIIT, the USPTO, the JPO, and the EU Trade Delegation, as well as IP attachés, scholars, IP practitioners, and industry representatives from China, the United States, Europe, Japan, and Korea.¹

IP laws around the world have protected the visual appearance of industrial products for generations. We now see an explosion of innovative designs in electronic products as demonstrated by offerings from a wide range of technology companies, including Microsoft, Huawei, ZTE, Baidu, and Sony, all of which are present today to join in this conversation. With the rapid change in technology, we now face the challenge of adapting that protection to address the visual appearance of designs in new virtual environments.

China as an IP Leader

It is no coincidence that a conference focused on high-tech innovation is happening in China. China has a tradition of scientific and technological innovation that stretches over 5,000 years and gave the world inventions such as the compass, gunpowder, papermaking, and printing. That innovative spirit continues to flourish today. To cite just a few examples:

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† Keynote Address delivered at Tsinghua University’s “Sixth International Conference on IP Protection of High Technology -- Industrial Design Protection for Graphical User Interfaces of Electronic Products,” Beijing, China, April 25, 2012.

1. “SIPO” is the State Intellectual Property Office of the People’s Republic of China; “MIIT” is the Ministry of Industry and Information Technology of the People’s Republic of China; “JPO” is the Japanese Patent Office; and the “USPTO” is the United States Patent and Trademark Office.

1. SIPO is now the first in the world in terms of the number of published patent applications, surpassing the U.S. Patent and Trademark Office and the Japan Patent Office for the first time;²

2. The large majority of applications received in the Chinese patent office are from domestic applicants. This is increasing domestic IP holdings at an amazing rate.³ Companies like Huawei and ZTE have become IP powerhouses—implementing global patent strategies, participating in global standardization activities, and licensing and enforcing their patents both in China and abroad; and

3. Chinese innovators are also beginning to protect their inventions outside of China. Patent Cooperation Treaty (PCT) applications at WIPO from China have grown 33.2 percent from 2005–2009, the fastest growth rate of PCT applications from any region in the world⁴; and from 2005–2010, China far outpaced India, Russia, and Brazil in the number of invention patents filed by domestic inventors at the USPTO.⁵

SIPO's efforts are part of China's move from technology consumer and manufacturer, to technology innovator—from “Made in China” to “Designed in China.” To paraphrase a common theme we hear repeatedly from Chinese IP officials, China is determined today not only to be a “big” IP country, but a “strong” IP country.

With the principle of a “strong” IP country in mind, I believe that this conference provides the ideal international forum in which to explore the role of industrial design protection in the 21st Century. In particular, today we consider the needs of innovators for design patents that will protect the unique graphical user interfaces that increasingly drive consumer enthusiasm for new technologies.

Design in the Era of Virtual Migration

Industrial design patents play a critical role in product development. Creators of physical products long have relied upon innovative designs to differentiate their offerings from those of competitors. If you think about the last time you bought a car, a dining table, or a lamp, instinctively you probably considered the design of the object in making a decision. While manufacturers of goods compete on the basis of many factors (including price, functionality, and quality), the design of the product typically has an important role in consumer decision-making.

2. See Bob Stembridge, *The Current State of Innovation in China*, IP VALUE 2012, 2011, at 15, 16 fig.2, see also *China Leads the World*, Thomson Reuters (Jan. 3, 2012), http://thomsonreuters.com/content/news_ideas/articles/science/china-leads-the-world.

3. SIPO 2010

4. *The Current State of Innovation in China* at 21 fig.17.

5. See *Patents by Country, State, and Year — Utility Patents (December 2011)*, U.S. PATENT & TRADEMARK OFFICE 3 (Dec. 2011), <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst/utl.pdf>.

Today, we see this same trend—a growing reliance on unique designs by successful companies—in the virtual realm. As computing technology has evolved, devices with electronic display screens have become commonplace. These include, naming just a few examples, computers, digital music players, smartphones, and electronic readers. Electronic display screens have also been integrated into a wide range of other products, such as autos, medical devices, and household appliances. Indeed, it is estimated that by the year 2018, more than 50 percent of new product designs will be implemented via electronic screen displays rather than physical structure.⁶

This technology-driven shift from three-dimensional physical designs to two-dimensional electronic screen designs has been referred to as “virtual migration.” Two technology developments highlight this trend towards virtual migration: (1) the transition to cloud computing; and (2) the massive growth in smartphones and other sophisticated mobile devices.

First, cloud computing.

- Last year, MIT’s *Electronic IP* asked me to write an article on IP and the cloud. In writing that article, I was reminded of the enormous potential for the cloud in China, which has more broadband users than the broadband-connected population of the U.S., Mexico, and Canada combined. China—and especially the SME sector that employs some 80 percent of the Chinese workforce⁷—stands to benefit enormously from the cloud, because it gives them access to a level of computing power that at one time only the largest enterprises could afford.
- Electronic designs are especially important to innovation in the cloud. In the cloud environment, no physical article is provided to the customer. Instead, computing power is delivered over the internet as a service, meaning that users interact with the cloud almost entirely via a computer screen. As a result, the design of a cloud service’s user interface is critical to the user experience, and is a key area of differentiation among competing offerings.

The second trend driving virtual migration from physical design to virtual design is the proliferation of Internet-connected devices.

- MIT reports that mobile subscriptions in China topped one billion in February 2012. That is quite a feat, unmatched by any other country. Clearly, Chinese consumers and businesses have embraced mobile communications.

6. Charles L Mauro, Chairman, Design Prot. Section, Indus. Designers Soc’y of Am., Presentation at Design Day 2011: The World of Designs, How Recent Critical Trends in Industrial Design Will Impact Design Patent Prosecution and Defense (Apr. 5, 2011).

7. Dexter Roberts, *Small Companies in China Feel the Squeeze*, BLOOMBERG BUSINESSWEEK (Aug. 10, 2011, 7:37 PM), <http://www.businessweek.com/magazine/small-companies-in-china-feel-the-squeeze-08112011.html>.

- Users are especially excited about Internet-enabled smartphones, which make up the fastest-growing segment in China’s mobile marketplace.⁸
- In this flourishing environment for smartphones, tablets, and other sophisticated devices, electronic screen designs have taken on a brand new role. They have supplanted the role of mechanical buttons and controls with “soft buttons” on touchscreens and other screen-based elements.
- The innovative role of screen designs can be seen in our own Windows Phone offering. In contrast to mechanical buttons, our Metro interface has live tiles that bring information updates right to the user. We are proud of this design innovation, and think it no less worthy of IP protection simply because it is electronic rather than physical.

The Role of Design Patent Protection in the Era of Virtual Migration

This trend of virtual migration that we see highlighted in the cloud and in mobile devices—where the design of graphical user interfaces and other elements of electronic screens are rapidly gaining in importance—has important ramifications for patent laws and practices around the world.

In particular, innovators in the technology sector need design patent protection for their graphical user interfaces, just as their counterparts in manufacturing long have relied upon design patent protection for the unique designs of physical products. Recall that industrial design patents have given manufacturers of physical products a proven tool to protect the unique design, shape, or ornamentation of their products. They also encourage competitive differentiation between suppliers, resulting in increased consumer choice and better products.

The same is true for design patents for graphical user interfaces, which help to justify the substantial investments companies make to develop, market, and support unique graphical user interfaces. These investments include the ones made in a growing number of professional designers who specialize in creating electronic screen designs that help clients attract consumers to their devices and cloud-based services. The ultimate beneficiaries of these and other investments are consumers, who gain more choices and better options among high-tech products and services in the market.

In short, the benefits that were promoted with the adoption of industrial design patent protection in the 20th Century can also drive innovation in the 21st Century—but only if

8. MIIT recently reported that the total number of mobile phone users increased by 20.67 million in the first two months of 2012, to just over one billion users in total. 3G smartphone users accounted for 15.5 million of the new users, and the total number of smartphone users in China is estimated at 143.92 million. Deng Shasha, *China Mobile Phone Users Exceed 1 Bln*, XINHUANET (Mar. 30, 2012, 3:31 PM), http://news.xinhuanet.com/english/china/2012-03/30/c_131499039.htm.

laws reflect the fact that design innovation increasingly is moving from the physical to the virtual realm.

As consumer enthusiasm for technological innovation continues to drive “virtual migration,” countries that aim to have strong IP systems should extend design patent protection to electronic screen designs. Taking that step will help to incentivize digital product innovation and attract ICT investment and economic growth.

Many countries on the Pacific Rim already recognize this. It is not just the United States, Canada, Japan, and Korea that by law or practice include some form of electronic screen designs under their respective industrial design protection regimes. Countries such as Indonesia, Mexico, and Russia also provide some form of industrial design protection for electronic screen designs—some more broadly than others and each in their own way (some countries for example require an inseparable device before protection will be granted).

In China, industrial design protection has been interpreted to cover only physical objects. This interpretation has excluded designs that are either “flickering or visible only under specific conditions”⁹ or “shown when the product is electrified.”¹⁰ In the spirit of the famous Chinese saying which calls for us to “advance with the times,” we would urge SIPO to update its interpretation of the Chinese patent law by modifying its patent guidelines to extend industrial design protection to electronic screen designs.

Conclusion

All of these developments reflect the broader principle that continued growth and innovation depend upon the ability of IP legal frameworks to advance with the times. That is why I am especially grateful to Tsinghua University for convening this conference today. The dialogue that IP leaders from government, academia, and industry are having today—and will have in the weeks and months to come—will help to ensure that patent systems around the world adapt to advances in technology so that we may all experience its benefits. ■

9. Guidelines for Patent Examination (promulgated by the St. Intell. Prop. Office, Jan. 21, 2010, effective Feb. 1, 2010), pt. 1, ch. 3, § 7.2, <http://www.sipo.gov.cn/zlsqzn/sczn2010eng.pdf> (China).

10. *Id.* at pt. 1, ch. 3, § 7.4(11).