Design Registration and Patent Statistics: A National and Global Analysis

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I. Summary

THE EXTENT of design registration protection by residents in several countries is analysed. These statistics are compared with resident patent data to evaluate the ratio of resident design registration to resident patents. The results of this analysis showed that many countries have significant design registration activity, and the activity relative to patent protection, while other countries have a very low activity level. An analysis of these statistics is provided.

II. Introduction

The value of Design Registration (DR)[1] protection has been a continuing subject of debate among business persons, IP attorneys, academics and industrial designers. This paper adds to the debate an analysis of recent statistics on DR grants obtained in a country by its residents (Resident Design Registrations - RDR). The focus on resident activities in design and patent protection gives a clearer picture of a country's unique approach to IP protection. Other DR grants in a country that are obtained by foreigners are not included in this study. Later in this review there is an analysis of the relation between RDR and Resident Patent (RP) protection in key countries. This study offers several important insights on product IP protection and the use of the DR and P.

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1. The term "design registration" (DR) will be used in this paper, as it is the most common identification internationally for the registration of a design. In some countries, such as the U.S., the equivalent term "design patent" is used. In the same respect, the term "patent" is widely used internationally for technology protection type patents, and it will be used in that way in this paper. In the U.S. the term equivalent to patent is "utility patent".

The data reviewed for this paper was gathered from the World Intellectual Property Organization's web site where annual reports on national DR and patent statistics are published, including information on resident DR and RP grants.[2] The latest report was for 2000, and this data was used, unless otherwise indicated.

III. Design registration fundamentals

Industrial design performs an essential role in product development and marketing. It adds value by creating a user friendly and attractive product. In essence, the outer appearance of a product is what a DR protects, the product "look" that is distinctive and at least novel. Some of the developments created by an industrial designer may be protected by patents, covering the function and arrangement of product parts for industrial use. Many opportunities exist for both DR and patent protection on the same product.

The dividing line between DR and patent protection is primarily that technical function protection in a patent. There is overlap, where a function can be produced by several product configurations, and the DR may inherently include protection for a specific embodiment to carry out that function. In several countries DR may serve a purpose similar to a utility model or petty patent. This fact will be discussed further in section VI in the analysis of RDR and RP statistics.

The number of DR grants is only an approximate indication of the extent of design protection in a country. In many countries more than one design can be registered in a grant. The total design registrations is a conservative statistic on the extent of design protection in a country.

IV. Fundamentals of design registration and patent resident statistics comparison

Since both DR and patent protection may be available on a product, for different features, usually, there should be significant number of both DR and patent grants in a country that has an energetic IP protection approach. Since DR protection is cheaper than the cost of a patent in most countries, it would seem logical that the number of DR grants would be higher than the number of patents.

This paper uses the ratio of DR and patent grants by residents in a country to develop several useful insights on the nature of DR protection in

2. The WIPO annual statistics reports are found on the web site, http://www.wipo.int, under home page News and Information Resources heading, where the WIPO Industrial Property Statistics can be found. Also, data was used from the Hague Agreement System reports, located on the WIPO home page under the heading *About Industrial Property, and by moving to the Industrial Designs page, and then* to the Overview page where a link to the Annual Statistics can be found.

that country, and to compare this national statistic for several countries in a global analysis of DR protection.

Residents in a country may rely almost entirely on patent protection for its products. A patent can dominate protection for technology, and cover all product appearance forms for a product implementing that technology. After alternative technologies are developed, or the patent expires, the product appearance developments may become the primary marketing difference.

The following analysis of current resident DR and resident patent statistics provides several interesting insights.

V. Resident design registration grants

Table I shows the data on Resident DR grants for countries with the largest number of grants, the order of the country with the country with the

Table I – Resident Design Registration (RDR) Grants

China	+ 239%	(1995 - 11200 RDR; 2000 - 37919 RDR)
U. S.	+ 49%	(1995 - 11712 RDR; 2000 - 17412 RDR)
France	+ 42%	(1995 - 52974 RDR; 2000 - 75402 RDR)
Germany	+ 25%	(1995 - 58732 RDR; 2000 - 73617 RDR)
Japan	+ 15%	(1995 - 34887 RDR; 2000 - 40037 RDR)
Republic of Korea	+11%	(1995 - 16977 RDR; 2000 - 18845 RDR)

largest number shown first, and indicates the percent change in grants from 1995 to 2000. The data in TABLE I contain a few surprises for some who thought the U. S. was not improving its domestic aggressiveness in pursuing DR protection. It ranked number 2 in the list for percent increase in DR grants. All these countries have experienced significant increases in DR grants in this five-year period.

The highest percentage of DR grants occurred in China, which may be due to the unique nature of economic development in that country. The high number of DR grants in China may be due to several factors. One factor may be a broader DR role in protecting functional embodiments, as well as product appearance, serving both needed purposes now. Since a DR is cheaper than a patent, the prudent approach in China may be to seek DR protection. These Chinese statistics also may reflect a movement there to develop new forms of products, a good sign for a competitive Chinese economy.

VI. Resident design registrations and patent statistics

Table II – Resident Design Registrations RDR and Patent (RP) Statistics in 2000

China	RDR/RP ratio – 5.35 (RDR 34652; RP 6475)
France	RDR/RP ratio – 5.29 (RDR 54541; RP 10303)
Germany	RDP/RP ratio – 2.70 (RDR 59773; RP 22030)
Canada	RDP/RP ratio – 2.27 (RDR 1117; RP 491)
Mexico	RDP/RP ratio – 2.22 (RDR 251; RP 113)
Hungary	RDP/RP ratio – 2.04 (RDR 355; RP 174)
Australia	RDP/RP ratio – 1.44 (RDR 1872; RP 1301)
Switzerland	RDP/RP ratio – 1.02 (RDR 1172; RP 1145)
UK	RDP/RP ratio – .91 (RDR 3812; RP 4170)
New Zealand	RDP/RP ratio – .75 (RDR 409; RP 547)
Republic of Korea	RDP/RP ratio – .71 (RDR 17728; RP 22943)
Italy	RDP/RP ratio – .47 (RDR 2229; RP 4726)
Sweden	RDP/RP ratio – .42 (RDR 866; RP 2082)
Japan	RDP/RP ratio – .34 (RDR 37939; RP 112269)
U.S.	RDP/RP ratio – .13 (RDR 11285; RP 85071)
Russian Federation	RDP/RP ratio – .09 (RDR 1228; RP 14444)

Table II shows the number of DR and patent grants in 2000 for some of the countries with significant IP protection activity. The ratio of Resident DR and Resident Patents is shown, indicating a range of from 5.35 to .09. The list is arranged in the order of the country with the highest ratio first to the country with the lowest one.

There are a significant number of countries that have substantial Resident DR and patent grants. Many of the leading industrialized countries are in the higher RDR/RP ratio group. This data supports the sound, basic business approach that both DR and patents should be used for product IP protection. Countries with too great a reliance on patents are not taking advantage of the product development strengths.

A study of the situation in each of the countries listed, to see what motivated extensive use of DR or emphasis only on patents is a complex analysis. Some countries have other IP protection that serves effectively as the equivalent to DR protection under certain circumstances. An example, is trademark - trade dress protection. Even copyright law may offer effective design protection for certain products. On the other hand, the

registration of a design is the one internationally recognized way to protect a design and obtain protection in other countries. It usually has the strongest rights that prevent copying and independent development of the same design.

The type of DR system in a country may have a significant impact on whether the DR system is used. Registration with examination on substantive grounds increases the cost and delays the grant of rights using a DR, usually. The U.S. and Japan have substantive examination DR systems that make obtaining a DR expensive and a slow process. The fact that the U.S. has a very low RDR/RP ratio suggests its DR system needs overhauling, or at least that it is not fully appreciated. Table I showed that the trend in the U.S. is to increase the use of the DR system, evidenced by the 49% increase in DR grants from 1995 to 2000. Most of the countries with the larger RDR/RP ratio have systems that immediately register a design without substantive examination. There are exceptions, as Table II shows some countries, like Canada and the UK, with substantive examination have significant RDR grants in relation to the RDP grants.

As discussed in section III, the type of DR system relative to what functional features can be protected may play a major role in the extent of DR system use. The large number of DR grants, such as in France, may confirm that the DR system serves both as a way of protecting product appearance for ornamentation, but also effective as a low cost way to protect the technical form and function of a product. This type of protection can be developed where there is no utility model or petty patent system in a country, and the pressure is for the protection of product embodiments by DR. In the long term, this unique demand need should disappear as utility model protection becomes more common. Even in countries with utility model protection, like Germany, the extent of DR is very great, indication that DR has an important and unique role.

A future report on the use of RDR and the relation to RP will have to take into consideration the European Community (EU) Community Design that just came into effect for registration in 2003. This EU wide registration system will change the design protection strategy for residents of the EU countries, and probably other countries. There is every reason to believe that residents in the current EU countries, like France and Germany, will continue their aggressive use of DR and patents.

While there are various factors that can effect the use of DR protection, it is clear that residents in many countries significantly use their DR systems. They do not rely primarily on the patent system.

VII. Conclusions

The statistics reviewed in this paper show that residents in many countries make extensive use of DR and patent grants to protect products.

The large number of DR grants in some countries may be based on many factors. An overall analysis of the reviewed data indicates that residents in many countries use DR protection extensively, but there are a significant number of countries where DR is not used very much. The absence of African countries, and many Asian countries, from the list of significant DR users is revealing. These countries may need to review their type of DR systems and introduce educational programs the value of DR. It is clear that DR can contribute significantly to the economic success of business and a country.

This study opened the door to many future specific studies on a country's use of DR and patents to protect a product. It would appear wise for a country to monitor this type of data, in relation to similar data from other countries, to see if their DR and patent systems are effective. There is a strong indication from this study that a RDR/RP ratio of at least 1 should be the goal. Part of the task will be to educate business on when to use a DR, and its advantages, while also explaining the important role of the patent.

In time, the differences in DR systems with the broader approach to function protection should diminish, and a global standard for DR protection will result that allows the patent and the utility model or petty patent, to play their roles as the sole protector of technology inventions. In the interim, DR systems will continue to play a broad role in providing relatively inexpensive product protection.