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IS INTERACTIVE DESIGN BECOMING UNPATENTABLE?

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INTRODUCTION

If 20th Century design was inspired by American architect Louis Sullivan's 1896 pronouncement that "form ever follows function," the key realization thus far of the 21st Century has been that this is merely a necessary – rather than a sufficient – condition for quality designs to flourish.

We have learned, and the market has confirmed, that an object should be designed in accordance not only with how it functions, but moreover with how it *should* function. Especially in the case of interactive technology, a description that has grown to describe just about anything, an object should function the way its user expects it to function.

As technology has become more powerful and flexible, the task of matching function and expectations has undergone a change akin to the philosopher Immanuel Kant's metaphorical Copernican Revolution. For older generations of technology – in which scarce resources limited both what functions were available and the maximum complexity of users' commands – the steps necessary for users to extract and refine what they could do with a device were explained in thick manuals. The prevailing strategy for more recent generations of technology has been to meet users halfway, competing to efficiently perform functions and effectively implement concepts that users have been had led to expect.

Today's designs, however, are increasingly able to cut out the middleman, more and more closely conforming to their users' preexisting intuitions and thought processes and less and less asking users to make those thought processes conform to products' capabilities.

In other words, the key to success in modern interactive design does not lie in "creating" the best design possible. Rather, it begins with doing the best possible job of stripping designs down to concepts and procedures with which the user is already familiar, preferably through everyday use. Where there is no alternative but to require more input from a user, his or her options are laid out in terms the user already can be expected to know. While the fusion of design and utility has not yet been perfectly realized, industry has become more fully aware of both parts of this process and continues to pursue integration in earnest.

This coevolution of design standards and procedures has clashed, and continues to clash, with the structure of U.S. patent law. The first problem is the potential uncertainty that surrounds the scope and strength of a design patent's protections. Even in the paradigm case of a design feature that has been aesthetically improved beyond what was required to give the feature its functional attributes**,** there remains the potential for overly broad claims about what aspects of a design qualify under the law as "ornamental."

Under section 284 of the U.S. Code's Title 35, triers of fact may award "non-statutory" damages for infringement of a design patent. But these same judges also may err in determining how much of an object's value comes from the aesthetic appeal of its ornamental features and how much comes from other sources of value, whether ornamental or functional, and whether patented or unpatented.

The risk of error at each stage of the process – from the initial design patent application to the ultimate test of infringement in court – creates at least some incentive for a designer to overstate his or her case. Fortunately, these incentives are similar to the temptations to make overly broad claims about other grounds for patentability. Regardless what grounds are at issue, the remedy inevitably is better training for examin-

ers and judges in traditional design standards and greater vigilance on their part about those standards' application.

PATENTING FUNCTIONALITY AS A DESIGN

The waters are muddier when an object's design derives its aesthetic appeal purely from its functionality; that is, from its *lack* of any feature that would fit the description "ornamental." For interactive designs of this sort, standard utility patents alone may suffice. To whatever extent the premise of separating aesthetics and functionality are relevant to these designs, existing statutory definitions fall short. They invite a fallacy of equivocation, falsely equating the aesthetic merit of functionality with that of applied ornamentation. Thus, some inventors seek design protection for aspects of an object that are, in fact, functional.

Weighing the aesthetic merit of a design feature's functionality when deciding whether the design feature is "ornamental" is a problematic endeavor, not the least because case law precedent explicitly prohibits this approach. A design patent "protects the nonfunctional aspects of an ornamental design as shown in the patent"[1] and design patents "do not and cannot include claims to the structural or functional aspects of the article."[2]

A common-sense reading of these principles suggests that, in order to have the kind of ornamental status that could be the subject of a design patent, an object must possess either some entirely nonfunctional feature or be the result of workmanship that does not contribute in any way to its function. Courts have endorsed this conclusion, to some degree. Nonetheless, there are clear problems with the ways that conclusion has been applied, and the further conclusions that have been drawn.

In 1993's *Seiko Epson Corporation v. Nu-Kote International, Inc.*, the Federal Circuit held that:

The 'ornamental' requirement of the design statute means that the design must not be governed solely by function, *i.e.*, that this is not the only possible form of the article that could perform its function.[3]

The first of the Federal Circuit's two glosses here makes sense on a broad level, but the second differs materially, arguably to the point of straying from the core of the term's generally understood meaning. When two designs perform equally well, the second paraphrase permits a claim that a feature is "ornamental" even if neither design contains any purely nonfunctional feature. That would apply even when something other than aesthetic merit (conceivably even the outcome of a coin toss) is the tiebreaking factor in the choice.

For that matter, if two designs without any nonfunctional features perform a given function reasonably well, but one does so better than the other, the second reading would seem to permit a claim that a feature is "ornamental" even if how well the designs function is the sole criterion for choosing between them.

This sort of slippage opens the door for strategic behavior by applicants, giving them a pretext to seek design patent protection for device features that might be denied utility patents. In turn, they may use those improvidently issued design patents to prevent others from including similar features for functional purposes.

NOVEL AND NON-OBVIOUS DESIGNS

The discrepancy between the new standards and processes for interactive design and the criteria of "novelty" and "non-obviousness" – prerequisites for patentability –creates a more general incongruity within current patent law.

While the guiding principles of such designs may be subjectively "novel" – in that, no previous designer has conceptualized them in a certain way – this standard would demand that the best design principles are those that are the *least* "novel" in an objective sense. The more fundamental and deeply rooted a product's design reflects the intuitions of its users (another way of saying the more "user friendly" a product is), then the more users the product will benefit. The design innovations that most conform to users' intuitions will be those that – from the perspective of users, outsiders to the design process and designers who have not been "spoiled" by cognitive priming – are the *most* obvious, rather than the least.

Should an application examiner or an administrative patent judge be unaware of or misunderstand these distinctions, the potential gains to the applicant are great, though they come at the expense of consumers and of the "Progress of Science and useful Arts" that the patent system is charged with promoting.

The system creates an incentive to acquire the patent rights for designs that are as aesthetically or conceptually simple as possible. While the old maxim that one "can't patent an idea" remains true, the confluence between design and intuition acts as a springboard for attempts to get away with patenting an *ideal*. These attempts are made, regardless of how long such ideals have played a crucial role in potential users' minds, consciously or subconsciously. Some participants in this game are willing to trade quality for quantity, churning

1. *Elmer v. ICC Fabricating, Inc.*, 67 F.3d 1571, 1577 (Fed. Cir. 1995).

2. *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988).

3. 190 F.3d 1360 (Fed. Cir. 1999), citing L.*A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117 (Fed.Cir.1993)

out applications and/or buying rights *en masse* in a "scattershot" approach to maximize their chances of success, before their business rivals can catch on and the government watchdogs can catch up. Depending on a particular patent holder's capital and entrepreneurial ability, the gains may be locked in either by bringing the designs to market or by looking to extract value from others, for instance by joining the ranks of "patent trolls."

The latter characters – notorious in legal circles and gaining recognition even among laypersons – wait for manufacturers (especially debt-financed ones) to sink the fixed costs of bringing to market a product whose resemblance to their patented products and designs is sufficiently close that a suit would not be deemed frivolous. They then file a claim of infringement, hoping that a manufacturer-defendant will agree to an early settlement (preferably with a gag clause) or a licensing agreement. The incentive to avoid litigation costs and being unable to recoup sunk capital invested is enough to prompt many such settlements.

BIG PLAYERS AS DESIGN PATENT TROLLS

Not all so-called "patent trolls" fit the stereotype of belligerent opportunists who cavalierly embrace the public's low opinion of them. Indeed, the label arguably could be applied even to such beloved American institutions as Apple Inc. Among the many counts included in its complaint against Samsung Group (in fact, just one of many complaints; as of July 2012, the companies were engaged in more than 50 lawsuits around the globe)[4] was one particularly egregious claim of infringement against the iPhone's "bezel," or clear faceplate through which on-screen content is viewable. Apple had followed the above strategy by designing the iPhone bezel as abstractly as possible (a rectangle centered within an oblong). This maximized the number of designs, whether derivative or independently developed, that would be substantially similar and the degree to which the average smartphone design would resemble it.

Apple shrewdly limited the scope of its claim to the iPhone's "face" alone, marking the back as unclaimed in the application and ostensibly irrelevant to its merits. While, at first blush, such a limited patent might appear to render Apple's claim more modest, in fact, it made it far more sweeping. By limiting the number of distinguishing features, Apple prevented competitors – whether large ones like Samsung or as-yet-unheard-of startups – the opportunity to create designs that differed substantially from the iPhone. Apple thereby made it as difficult as possible to design a product that would not draw at least a threat of a lawsuit. Even if such suits were unsuccessful, under the U.S. fee system, they likely would prove ruinous to a would-be market entrant.

Rather than protect an inventor's right to a period of exclusive profits either from making and marketing his or her invention, or from licensing that right to a better-placed entity, the trend clearly is toward the use of patents as swords, to bring lawsuits or the threat of lawsuits in an effort to deter competitors from entering a product market. When players such as Apple bring their formidable resources for design and vast financial resources for litigation into the ring, the "chilling effect" can become especially pernicious.

This culture can provide some immediate rewards for innovation by very skilled or very lucky designers. However, those rewards are thrown into the middle of what is largely a haphazard scramble. When preemption by a rival's patent filing can render an in-preparation application utterly worthless, not only does the perfect become the enemy of the good, but the good becomes the enemy of the mediocre.

The effect of this trend is to push the interactive-technology sector in the direction of an oligopoly. The parties that tend to come out on top are the biggest players – the Apples and the Samsungs. Firms that can reap the profits from bringing a product to market are those whose pre-existing income streams allowed them to purchase and hoard individual patent provisions that embody aspects of a better, unified design.

This scramble interferes with smaller players' ability to make headway on a usable portion of their own applications. Even those who have most of what they need can't start production, because they can't afford to risk a lawsuit from or pay the fees demanded by the trolls or big firms. If and when the resulting bottleneck does resolve, the cause is often that a firm with sufficient resources happens to acquire an interest in breaking it. In the meantime, the opportunity costs of deadlock are borne by the sector as a whole and by consumers, the former losing the opportunity to build on new innovations and the latter losing the ability to benefit from finished products.

While interactive design is not yet in danger of being rendered unpatentable, the rise of interactive technology and the associated merger of design and functionality are shifting an ever-greater share of protection for new designs from traditional design patents to utility patents. Applicants, examiners, litigants and judges all would do well to revisit the issues of which types of patent are appropriate for what substantive purposes and, accordingly, which rules and standards govern what substantive claims in applications and litigations. Misapplications of these rules and standards both generate problems unique to the design-patent field. They also add a distinctive, usually intensifying twist when they

4. Florian Mueller, "Apple seeks $2.5 billion in damages from Samsung, offers half a cent per standard-essential patent," Foss Patents, July 24, 2012. http://www.fosspatents.com/2012/07/apple-seeks-25-billion-in-damages-from.html

become implicated in instances of problems affecting the broader patent-law system.

RECOMMENDATIONS

Design patent applications should be subject to increased skepticism, specifically with respect to the narrowness with which the scope of a given design patent's protection is construed. When reviewing applications, the PTO should devote special attention to the nonfunctionality aspect of the ornamentality requirement. Examiners should evaluate the claimed aspect of a design at a more granular level and maintain emphasis on ensuring that functional aspects of an object's design are not swept in along with nonfunctional aspects.

One way to do so would be to impose what amounts to a simple but highly specific "but-for" test: If the device would be less functional if the claimed aspect of the design were absent, the claim in question fails the nonfunctionality test. Satisfying such a test would maintain the pressure on a design claimant to painstakingly specify not only the object or feature for whose design the protection is sought but also which characteristic of that object is alleged to be ornamental. Indeed, it might be worth requiring an applicant to provide express justification for the statement that a given claimed characteristic of an object does not contribute to the object's functionality.

Courts also should take care to limit findings of design infringement to cases in which the similar aspects of the article's design perform an ornamental purpose, rather than a functional purpose. Another way to state this is that it must be at least possible for an article's functional purpose to be served equally well by a design with different (or no) absent ornamentation. In turn, when they find infringement, courts should limit damages on the associated count to the value of losses caused by the loss of the protected ornamentation's uniqueness.

More generally, both PTO and the courts should renew their attention to the criteria of novelty and non-obviousness, putting the "teeth" back into each as opportunities arise. A formal legislative or judicial articulation of how much scrutiny a design-patent application should receive may be in order. For instance, a sliding scale could be applied such that scrutiny of an application's claims of novelty and non-obviousness increase with the simplicity of the design at issue. Judicial reexamination of these issues in the context of defendants' counter-challenges to the validity of existing design patents would be especially fruitful.

Under the right of priority spelled out in 35 U.S.C. 172, when a U.S. design patent application is filed subsequent to an application from another World Trade Organization member country that seeks the same protection, the U.S. application may be back-dated by up to six months. That window of time should be reduced, to decrease the time costs that competitors must sink into "waiting and seeing" before deciding whether to launch a similar product in the United States. This change arguably would have greater effect in the rapidly evolving interactive-design sector than in other, less active fields.

In their search for less problematic alternatives to the existing design-patent regime, Congress and the federal courts should draw inspiration from current laws that provide other protections and associated remedies. For example, Congress should consider allowing the independent-discovery defense now available under copyright law.[5]

Different burdens and standards of proof would serve different policy goals and interest groups. Requiring proof of intentional imitation as an element of every case would be defendant-friendly, while placing on defendants the burden of both production and persuasion would be welcomed by plaintiffs. A likely middle ground would resemble criminal-law affirmative defenses that require the defendant to produce at least some evidence but then place on the complaining party the burden of disproving it.

In cases in which a defendant has not infringed a design patent (as properly construed per the discussion above) but the facts suggest at least the possibility of recovery under some cause of action not pursued, judges should consider gently noting in dictum their lack of opportunity to rule on the merits of the corresponding case. These other causes of action may offer far more limited damages. For example, in copyright infringement, recoverable profits are subject to reduction by any amount proven to be derived from non-infringing material, and statutory damages are capped at $150,000 even for willful infringement. However, confining a plaintiff to these lesser opportunities for recovery may well prevent windfalls and better strike the public-policy goals that intellectual property laws were designed to further.

My final recommendation is to make standard the practice, currently authorized by Section 285 only in "exceptional cases" of bad faith or misconduct, of awarding reasonable attorney's fees to the prevailing party in a civil case. The court would be responsible for the case-by-case application of this standard. It would be subject to a cap equal to the victor's actual expenses, as documented to an extent consistent with privilege and which would not preclude the separate awarding of any punitive sanctions otherwise permitted and justified.

5. For a minority reading that Section 289 authorizes recovery of total profits or statutory damages only when a plaintiff proves specific intent, see David Crouch, "Design Patent Damages: When is proof of copying required for profit disgorgement?", at http://patentlyo.com/patent/2012/10/design-patent-damages-when-is-proof-of-copying-required-for-profit-disgorgement.html (accessed Jan. 31, 2014)

This "loser pays" reform would greatly reduce the chilling effect that major players can exert on both large and small firms' efforts to bring to market new products and, with them, the innovation and progress that their designs exemplify.

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