

## VIRTUAL DESIGN THEFT UPDATE: 3D PRINTING



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*Virtual design theft*  
— a term coined by

Banner & Witcoff in a 2009 Innovation Journal article — is the unauthorized creation, sale or use of a digital model of a real-life design. That 2009 article previewed the alarming rate at which virtual design theft occurred in the digital world and the potential intellectual property protections that could successfully stop it. Five years later, this article takes a look at how virtual design theft has further expanded into the rapidly growing market of 3D printing and whether the law of design patents, copyrights and trademarks has evolved to effectively combat the problem.

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### 3D PRINTING

3D printing is the process of making a three-dimensional object from a digital file. Engineers and designers have been using 3D printers to make prototypes quickly and cheaply for many years before investing significant amounts of money and resources to produce actual products at a factory. As 3D printers have become more sophisticated and reliable, they are now also being used to make final products. For this reason, the public has become more intrigued by 3D printers and their potential capabilities to make a multitude of objects in one’s own home. Although it is still rare to even know someone who owns a 3D printer, let alone in their own home, companies are

heavily investing in this technology to make affordable, consumer-oriented 3D printers (several models are currently priced less than \$1,000, with some priced as low as a few hundred dollars) with the hopes that they will become common household items in the next five to ten years.

So what will people do with 3D printers in the confines of their own home? Most likely the same thing that people did with music and movies when they were first digitalized — share copies of their 3D digital design files. For example, to fill the growing demand for 3D printing designs, people are creating realistic models of existing designs and also creating new designs. They sell these models through specialized websites, such as

<https://digitalstore.makerbot.com/> and [www.turbosquid.com](http://www.turbosquid.com). Even mainstream websites, such as [www.amazon.com](http://www.amazon.com), now have their own 3D printing stores. Some of the computer models on these sites are impressively realistic and have been created using 3D scanner technology or CAD software. While many of these digital models may be authorized, after a quick review of them, it is clear that there are many unauthorized digital models. And even if an authorized design is purchased, the purchaser is then easily able to make unauthorized uses by sharing the digital file of the design with others and making more than one 3D print of the design. Thus, just as the marketplace for the exchange and sale of

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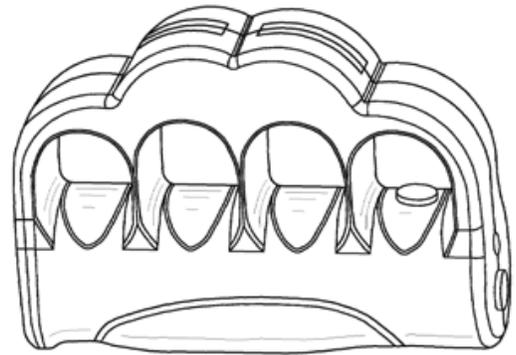
[DESIGN THEFT, FROM PAGE 13]

unauthorized music and movie digital files quickly grew, the marketplace for exchanging and selling unauthorized digital design files is following suit.

With the addition of 3D printers, virtual design theft may now result in both the unauthorized digital use of a design and the unauthorized creation of a 3D physical object of that design. The rise and expansion of virtual design theft continues to pose two main questions: (1) Is it illegal? (2) Can the owner of the original design stop it? The answers to these questions are still developing and depend on a number of factors. For example, potential avenues to combat virtual design theft include design patents, copyrights and trademarks. Each is applicable in only selected circumstances, and each has its own strengths and weaknesses. A number of enforcement efforts have recently shed light on how patents, copyrights and trademarks may protect against virtual design theft.

### DESIGN PATENTS

Whether a 3D virtual design would infringe a design patent was tested for the first time in *P.S. Products Inc. et al. v. Activision Blizzard Inc. et al.*, Case No. 4:13-cv-00342-KGB (E.D. Ark., June 5, 2013). P.S. Products sued Activision for patent infringement of U.S. Design Patent No. D561,294 (“the ‘294 patent”) directed to a design for a stun gun in the shape of brass knuckles. Activision’s video game, “Call of Duty: Black Ops II,” included a virtual stun gun weapon that could be held as brass knuckles in the game. Notably, the virtual stun gun weapon did not remotely resemble the design in ‘294 patent.



Comparison of P.S. Products’ Patented Design (top) with Image of Activision’s Virtual Weapon (bottom)

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The court did not focus on these stark visual differences, however, and instead granted Activision's motion to dismiss for failure to state a claim because "[n]o reasonable person would purchase defendants' video game believing that they were purchasing plaintiffs' stun gun." The patentee in this case, however, failed to present its strongest argument to the court, *i.e.*, that based on the language of Section 271 of the design laws, a design patent protects the design, not the underlying physical article of manufacture embodying the design. So while this case gives virtual design thieves some initial support for their side of the argument, other courts may still likely side with design patentees on this issue.

## COPYRIGHT

The owner of a valid copyright that covers a design should have a very strong case against a virtual design thief. In copyright lingo, a 3D model is a copy or derivative work of the original. (Fair use as a defense to copyright infringement should also be considered, but it is beyond the scope of this article.) The toughest hurdle for copyright protection of designs is the separability test. The separability test permits copyright protection only for designs that incorporate graphic, pictorial or sculptural features that are conceptually or physically separable from the utilitarian aspects of the product. In one well-known decision, the U.S. Supreme Court found that a lamp base shaped like a human figure was protectable as a sculptural work. In another case, the court found that artwork as part of an ornate belt buckle was protectable. Copyright protection is commonly found in designs containing original surface ornamentation because the surface ornamentation is often times conceptually separable from the product. However, the opposite proposition is also true: designs that are not separable from their underlying article will not be protectable.

Additionally, a digital design based on an actual physical object may not warrant copyright protection. For example, in *Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc.*, No. 06-cv-97, 2006 U.S. Dist. LEXIS 65641 (D. Utah, Sept. 12, 2006), Meshwerks created two-dimensional representations of Toyota vehicles for advertisements. When Toyota used the 2D digital files for more than one advertisement, Meshwerks sued Toyota for copyright infringement. The court held that Meshwerks' 2D digital files did not meet the originality requirement for copyright protection because "the digital models created by Meshwerks correspond to the Toyota vehicles they were intended to represent" and thus were merely simple reproductions and not original.

Even though originality is required for a design to be entitled to copyright protection, the threshold is fairly low. In *Osment Models, Inc. v. Mike's Train House, Inc.*, No. 2:09-CV-04189-NKL, 2010 WL 5423740 (W.D. Mo., Dec. 27, 2010), the court held that there may be copyright protection for 3D digital files based on actual buildings that were scaled in size and had some visual aspects changed, resulting in "models [that] do not appear to be mere replications of other objects in a different medium." Thus, in certain cases, a 3D scan of a physical object in the public domain that is modified in more than a trivial way may warrant copyright protection.

## TRADEMARKS

Two categories of trademarks can provide relevant protection against virtual design theft: marks used on or in conjunction with the product, such as the name or logo of the product or manufacturer, and product configuration trade dress. In order to register a product configuration trade dress, the owner needs to show that the product configuration has acquired distinctiveness. **MORE ►**

[DESIGN THEFT, FROM PAGE 15]

Distinctiveness is acquired by substantially exclusive and continuous use of the mark in commerce such that the primary significance of the product configuration, in the minds of the consumers, is the product's source.

Trademark law will not prevent the design of a new product from being copied until it has acquired distinctiveness. If the design is copied early on, then trademark law will never protect the design because it will not be uniquely associated with a single source. One strategy is to obtain a design patent to prevent similar designs from entering the market so that the product design acquires distinctiveness.

The usual test for trademark infringement is whether there is a likelihood of confusion about the source, sponsorship, affiliation or endorsement of a product. The facts applicable to a likelihood of confusion analysis will likely be different for the website selling the unauthorized digital design files and, for example, a video game maker using the models and selling the video game. The websites selling these files use trademarks,

such as manufacturer and model names, as "tags" that enable searching. It should also be noted that in some circumstances, trademark dilution may be a viable cause of action in situations where virtual design theft has occurred and the trademark has reached a requisite level of fame.

## CONCLUSION

Virtual design theft has significantly grown over the past five years and with the emerging market for 3D printing, it will continue to occur at an increasing rate. The success of enforcement efforts of design patent, copyright and trademark laws is still uncertain and depends on a number of case-specific facts. Thus, while companies affected by the advent of 3D printing may eventually decide to follow the music and entertainment industry by changing their business models to adapt to the digitalization of their product, well planned procurement and enforcement strategies of intellectual property will be important in the interim to protect their current business models against virtual design theft. ■