

# 3D Printing: Revolution in the Making

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Yet will this activity necessitate a new approach to anti-counterfeiting or will it be a case of 'business as usual'?

Our classic printers read information from digital documents and print the formatted text in ink, line by line, onto paper. A 3D printer interprets CAD, or computer aided design, files — similar to a blueprint. These blueprints allow the 3D printers to “print” by building objects up layer-by-layer out of plastic, metal or other materials. This method of manufacturing allows for the elimination of older techniques such as injection moulding.

## Opportunities

3D printing has already proven capable of making sophisticated items including toys, fashion items, firearms, medical devices and even food – in January 2014, 3D Systems announced that it has entered into a multi-year joint development agreement with The Hershey Company, the largest producer of chocolate in North America, to explore and develop opportunities for using 3D printing technology to create edible foods. One of the major patents protecting a specific type of 3D printer expired in January 2014. Therefore, the cost of 3D printers has decreased steadily due to the expiration of such patents on the 3D printers themselves. The price today ranges anywhere from just under \$1,000 to more than \$3,000, which allows this technology to be more accessible to the everyday consumer.

However the technology is developing quickly enough that brand owners should be aware of possible future dangers.

## Challenges

The main issue with 3D printing and copyright is in the potential for widespread personal manufacturing of copyrighted, trademarked or ornamental design objects, independent of established markets, in ways that cannot be detected, prevented, or controlled.

Copyright is an unregistered right that automatically arises upon creation. In a nutshell, copyright protects original, artistic and non-useful works and applies to common subjects of 3D printing such as sculptural works or three-dimensional representations of protected two dimensional illustrations. To be copyrightable, an object must have a minimum of creativity original to the author. If this threshold is met, the work is thereby protected by copyright.

Copyright infringement principles also apply to 3D printing just as they apply to any other copyrighted material. 3D printing is to three dimensional objects what MP3s and peer-to-peer sharing networks were to the music and movie industries. These technologies were used to copy and exchange digital property, most often illegally. Pursuing infringement claims against a service provider for illegal 3D printing violations, in light of the copyright laws, can prove difficult if the provider is complying with all the safe

harbouring requirements.

If an individual/entity copies and distributes a 3D printed copy of a copyrighted object, the owner has the right to sue for copyright infringement. Therefore, it would be illegal for anyone to try to replicate copyrighted objects with their 3D printers, or post copyrightable CAD files or software online.

At the same time, the ability to print labels for consumable products does raise some areas of concern for both food and pharmaceutical sector companies. The potential for infringers to mass-produce products with the same external physical appearance as legitimate goods by way of 3D printing could result in a significant volume of counterfeit goods reaching the marketplace. This is particularly worrying when such products would be combined with potentially flawless imitation packaging, labelling and instructions for use, since the overall product could appear to the relevant consumer as identical to the genuine item.

An additional concern is that there is no way to control the ingredients counterfeiters would use to create the imitation product in question. As a result, rights holders may be faced with a scenario whereby goods that are externally identical to their own products are reaching the marketplace, but with either ineffective or potentially dangerous ingredients included which can create serious health hazards. Evidently, counterfeiting of consumable goods is not a new activity; nonetheless the availability of 3D printing technology potentially enables increased local production, easy accessibility – and a corresponding increase in the complexity of monitoring and regulating such activity.

And finally, what better technology is there than 3D printing for design infringement? Designs can be easily replicated and allow copycats to come as close as possible to counterfeiting products not necessarily reproducing the copyrighted aspects or placing a trademark without authorization. Designs may only be protected if registered in the jurisdiction where it will be enforced. So much different from trademarks, which if unregistered but well known can still be enforced, or copyright which if not registered can still be enforced. Designs will have to be registered.

Faced with the triple setback of a drop in profits, damage to the brand's goodwill and danger to public health, rights-holders will need to consider how to combat infringement of this nature, and incorporate the monitoring of products created by 3D printing into their on-going anti-counterfeiting programs. In the same light that online auction sites made tracking the flow of counterfeit goods more complicated, the widespread ability to make fake goods will muddle efforts to trace supply chains.

## **Conclusion**

The evolution of 3D printing will require rights-holders to invest more in acquisition of intellectual property rights and widen the scope of protection, especially with respect to design rights. Registered designs have been a sought-after right only for a few industries but will shortly probably become an equally important right across all industries. As such, rights-holders should ensure that all products placed on the market are fully protected by way of trademark, industrial design and ensure a registered Copyright. This would include not just the brand name and related device elements, but also securing three-dimensional registered trademark protection for products which have distinctive character traits. Rights-holders are encouraged to consider securing registered design protection for the external appearance of the products themselves and their packaging where appropriate.

A final consideration for rights-holders will be the risk faced by infringers obtaining the actual recipe for the item in question, and the mass production of the recipe by way of 3D printing. Although remedies exist by way of enforcing patents and rights in confidential information, such steps are reactive. This technological development emphasises the need for a proactive stance through increased vigilance in the marketplace.