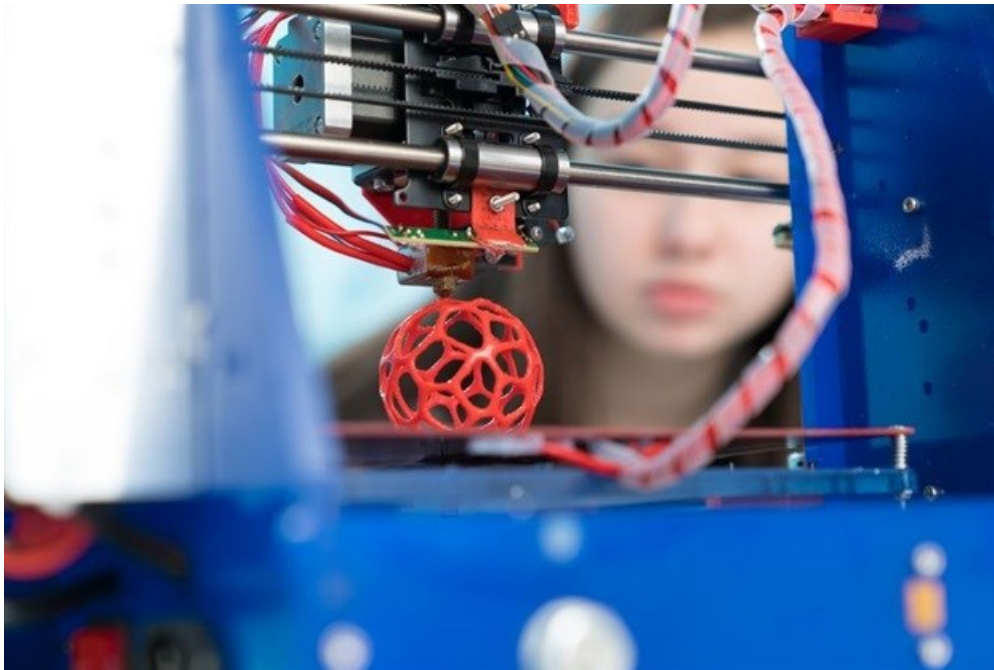


3D printing and the protection of IP rights

By [Pamela Maluleke](#)

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By now, most people would have heard of the term 3D printing, but not everyone understands what it entails. It is often an obscure process which is vaguely understood outside of the technological sector. In a nutshell, 3D printing is a common term for the creation of a three-dimensional object from a digital model. The design for the 3D object is created on a computer using a scanning device or computer aided design (CAD). The design is used by the 3D printer as a "blueprint" to create the object layer-by-layer out of metal, nylon, plastic or other materials. In other words, 3D printing involves the "copying" and/or reproduction of a blueprint into a physical object.



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Recently a house was built by the process of 3D printing in France, with the lead inventor on the project stating that

“ For 2,000 years there hasn't been a change in the paradigm of the construction process. We wanted to sweep this whole construction process away. That's why I'm saying that we're at the start of a story. We've just written, 'Once upon a time...' ”

It took two days to “print” the house, and another four months to add the roof, windows, and doors to the house. In summary, the construction of this house took less time, and cost significantly less. Stories regarding 3D printing innovation are gradually becoming more prominent in our news feeds, which signifies that not only is 3D printing here to stay, but it will drastically transform the commercial, trading and legal landscape entirely in the not so distant future.

The Intellectual Property (IP) sector will have to start a “once upon a time” narrative with regards to the protection of such IP rights. It has been said that 3D printing will have the same, if not more of an effect on IP rights, as music, movie and other streaming and downloading sites had on copyright infringement. Although 3D printing machines are not easily accessible to the average South African, it is not far-fetched to imagine a world where 3D printers are available in almost every household.

3D printing technology makes it easy to copy and reproduce products, regardless of whether the goods are protected by a patent, trademark or copyright. It is as simple as downloading a CAD file, which can instruct the printer to reproduce a 3D object. The expansion of 3D creates complex IP policing issues. 3D printers are increasingly common in households, which

means that essentially any person may 3D print any product in the comfort and safety of their own home. So, unless, we have police knocking on doors to determine if any sort of infringement is occurring, the enforcement of IP rights may be an uphill battle.

Recently in the United States there has been a call to ban the dissemination of the gun/firearm blueprint, after a student allegedly threatened committing a school shooting using a 3D-printed gun. The legislator in the US is now required to seriously consider the implications of 3D printing and how to legally regulate it. As much as the above example is a drastic case, this indicates the widespread implications 3D printing will have on various sectors. 3D printing presents new IP enforcement questions for copyright, trademark and patent and design rights.

According to the Copyright Act in South Africa, copyright is automatically conferred on a work eligible for copyright protection at the time the work is created, provided certain requirements are met. Therefore, subject to the requirements of the Copyright Act, the blueprints used for 3D printing may qualify for copyright protection. Although this is the case, from an enforcement perspective, it may be an onerous task for a copyright owner to enforce their rights against infringement by third parties.

Similarly, to illegal music/movie sharing systems, blueprints for 3D printing are usually illegally sourced and distributed and shared to numerous people. Which begs the question, who will the copyright owner enforce their rights against? Will it be the one customer the owner is aware of, or the person who initially shared the blueprints, and what happens to the countless other people currently in possession of the blueprints. How far can the trail be traced back, and who should be held responsible? These are questions that will need to be considered, before instituting copyright infringement proceedings.

Due to the nature of 3D printing, patent and design protection stands to be the most affected with regards to the use of 3D printers in households. The benefit of registering a patent and design is that the proprietor has a monopoly in the protected concept or invention, which amongst others, enables the proprietor to prevent others from making, using, exercising, disposing of or importing the protected article.

Now with 3D printing, a consumer can easily access 3D blueprints, and print the objects in the comfort of their own homes, which could amount to infringement of a patent or design. The same difficulties, indicated in relation to copyright enforcement, will also be applicable to patent and design rights. Consumers who have access to 3D printing will more likely print whatever they require privately, for example spare car parts. Instead of paying a lot of money to buy the spare parts from the manufacturer, it will be cheaper to print the object privately. These acts would constitute infringement, and although there are provisions in the both the Patent Act and the Designs Act providing remedies for infringement, the difficulties in identifying the infringing parties will be a major hurdle the owner will have to circumvent.

When considering the provisions of the Trade Marks Act, Section 34 (1) (a) to (c) indicates that the unauthorised use in the course of trade of an identical or similar to the trademark for goods or services which are identical or similar to the trademark is prohibited. Presently the Act regulates the *use* of trademarks and not their creation. A trademark is infringed by the “unauthorised use in the *course of trade*”.

The use of the phrase in the “course of trade” alludes to a commercial aspect, and does not extend to personal use. In order to distinguish private and commercial use, the law primarily focuses on whether the use takes place in the context of a commercial activity with a view to obtain a monetary benefit or if it is used merely for private use.

Therefore, if a person 3D prints a trademarked object in their home for personal use (with no financial benefit), can the proprietor of the trademark institute trademark infringement proceedings?

As it currently stands, the printing of any trademarked object for personal use does not constitute infringement based on the provisions of Section 34 of the Act. A 3D printable trademark object may include numerous objects that depict trademarks on physical objects, such as phone covers, key chains, toys etc. Therefore, the potential scope for infringement of trademarks is wide ranging.

3D printing will require a readjustment in the protection and enforcement of IP rights. That said, it is not all doom and gloom for the IP sector, the protection of IP rights will require an overhaul in the management of the IP portfolio. It will become increasingly important to maintain a reputation and IP ownership in copyright, patent and design and trademark rights.

The history of infringement in the film and music industry does not need to repeat itself. This is the time to be proactive with the protection of IP rights, as 3D printing is a moving train with no destination in sight.

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