Balancing Patents and Trade Secrets – Getting the best of both worlds

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Patents and trade secrets seem like opposite sides of a scale. Trade secrets derive their legal protection from their inherently secretive nature whereas patents can only be protected through disclosure of the invention – the specification in a patent application must describe the invention in a manner that would enable one with ordinary skill in the art to make and use the invention without an undue amount of experimentation. In fact, a patent will be invalidated if the important details of the invention are not described in the specification.

The rights granted to patent owners include the right to exclude others from making, using, or selling their invention. A trade secret, as long as it is kept secret, gives the owner an advantage over their competitors. However, it should be noted that this competitive advantage may not be recoverable once secrecy is lost.

Similarly, both patents and trade secrets can be exchanged for economic benefit through licensing, or they can be used as a negotiating asset when selling, buying a company or planning a merger.

Typically, IP owners will prefer patent protection if:-

- the invention can be easily reverse engineered;
- they are wary that a competitor may be inventing something that is similar; and/or
- they need to publicly disclose their ideas – for example, startups would need to pitch their business ideas to investors.

Trade secret protection is preferred when an IP owner, for example, has a manufacturing process that does not meet the patentability criteria. Trade secret may also be preferred by IP owners if:

- the life of a product is shorter than the 20-year life of a patent – like in an area of technology where inventions evolve very quickly; or
- they expect that the life of a product can be substantially longer than 20 years – like in the case of Coca Cola.

Coca-Cola has held its trade secret for decades and has successfully kept the public from knowing its secret recipe[1]. If Coca-Cola had sought patent protection instead of keeping the formula secret, the formula would become known to others, and once the patent expired, anyone could use it.

Combining these two types of protection can be tricky. As tricky as it may be though, many IP owners have managed to combine both types of protection to further elevate the value of their inventions.

An example of such a combination is by Wyeth (now a part of Pfizer) for their product Premarin. Premarin is the brand name for an estrogen medication that consists of conjugated estrogens extracted from the urine of pregnant mares[2]. It is marketed for the

treatment of menopausal symptoms. A series of patents were issued on the manufacturing process of the drug in the 1940s. In addition to these patents, Wyeth decided that instead of patenting the estrogen extraction process, they would keep the process as a trade secret. So, even though the patents expired long ago, Wyeth is able to maintain exclusivity to the drug. To-date, there is still no generic form of Premarin available.

This hybrid patent/trade secret protection is also documented in industries other than pharmaceuticals. Coskata (now bought over by Synata Bio), is using such hybrid protection as its intellectual property strategy as well. Coskata uses existing gasification technology to convert organic material into synthesis gas, which is a mix of carbon monoxide and hydrogen. Instead of fermenting that gas or using thermo-chemical catalysts to produce ethanol, Coskata pumps it into a reactor containing bacteria that consume the gas and excrete ethanol[3].

Since the reactor can be deconstructed and analysed and then reconstructed i.e. reverse engineered, patent protection would be more appropriate and valuable since it is unlikely that the overall construction of the reactor can be kept as a secret. As such, Coskata have filed several patent applications on the reactor used in the process. Reverse engineering of the bacteria however is far more difficult than reverse engineering of the reactor, which is why Coskata decided that the identity of the bacteria is to be kept secret. This way, as long as Coskata obtains sufficiently broad protection for the reactor and identification of the bacteria is not made known, they will be able to have strong market power in the biofuels industry.

From the examples above, it might be safe to say that hybrid protection is most suitable for inventions that can be further broken down into sub-inventions[4]. This is probably why hybrid protection is common in the food industry where recipes, lists of ingredients or formula are kept secret, while cooking, manufacturing or packaging processes are patented.

Sometimes, it is not obvious that an invention can have this hybrid protection at its inception. For example, it may be that at its inception, the best way and/or the only way for the invention to be protected is through patents. However, after filing the patent application and further research, the inventors learn more about the invention and find a better way to make the invention work. As the requirement that the best method be disclosed is satisfied by disclosing the preferred embodiment at the time the application is filed, the inventors do not need to disclose that information. The improvement can now be retained as a trade secret.

Evidently, choosing the type of protection would depend on the short, intermediate and long-term goals of the IP owner. These goals may differ with every invention. As both types of protection play an important role in a comprehensive intellectual property strategy, consideration should also be given to protecting the same invention by both methods.

[1]http://www.coca-colacompany.com/press-center/press-releases/coca-cola-moves-its-secret-formula-to-the-world-of-coca-cola

[2]PREMARIN U.S. Physician Prescribing Information

[3]https://www.technologyreview.com/s/409631/how-coskata-makes-biofuels/

[4]Protecting Innovation Through Trade Secrets and Patents: Determinants For European Union Firms, EUIPO, July 2017