



Trade Secrets vs. Patents in the UK Space Sector

In this article we take a look at how trade secrets and patents compare as means of protecting inventions by UK space sector businesses.

Background

Properly protecting intellectual property is a key issue for innovative UK space sector businesses. This can set a business apart from its competitors and is also where a lot of the value can lie. It is therefore highly important for such businesses to have an informed and robust intellectual property (IP) strategy.

A recurring question for many innovative businesses in the UK space sector is whether to protect their inventions through trade secrets or patent protection. These forms of protection are very different and have contrasting advantages and disadvantages, and it is important for businesses to be aware of these when developing their IP strategy.

Below we compare these two forms of protection, with particular emphasis on issues relevant to UK space sector businesses.

Trade Secrets

In the UK, a trade secret is, in essence, secret know-how or other information that is valuable to a business because it is secret [[The Trade Secrets Regulations 2018, Regulation 2](#)]. For example, this may be a special way of operating a satellite, or processing earth observation data, that provides a business with a competitive advantage because no one else knows how to do it.

In order to qualify as a trade secret in the UK, reasonable steps must be taken to keep the information secret (i.e., confidential). This may include ensuring all employees

understand that the information is confidential and not to be shared, as well as not disclosing the information to third parties (or where this is necessary, doing so in confidence and under an appropriate non-disclosure agreement).

If someone discloses, acquires or uses the trade secret in breach of that confidence, then remedies can be sought from the UK courts. These remedies can include an injunction (i.e., an order not to disclose or use the information) and damages (i.e., an order to compensate the loss suffered).

The main advantages of protecting an invention through a trade secret is that the invention can be kept secret and doesn't need to be published; it is relatively inexpensive; and there is no fixed term to how long the protection lasts: as long as the information remains a secret and of value, the trade secret protection will continue.

However, there are **significant risks** to protecting inventions through a trade secret. For example:

- If the information is publicly disclosed (e.g., by an ex-employee, a third party, or by accident), then it is no longer a trade secret, and the protection no longer exists. In such a case there is nothing preventing further use of that information by competitors.
- If the disclosure occurs by accident with no breach of confidence, then there is no remedy available. Even if the disclosure is by an individual in breach of confidence, the damages recoverable from an individual may not be sufficient to compensate the loss suffered as a result of the disclosure.
- A trade secret does **not** provide protection against other people coming up with the same invention independently or by reverse engineering. Further, in such a case, that person could obtain a patent covering the invention, which could give them the right to prevent you using the invention.

Accordingly, while relying on trade secrets is a relatively inexpensive strategy, it is associated with significant risks. Some of these risks can be mitigated by using patent protection instead (discussed below).

Patents

A patent is legal right to prevent others from using the invention covered by the patent in the relevant jurisdiction. A UK patent will provide this right in the UK [The Patents Act 1977, sections 60 and 61], and, corresponding patents can be applied for in other countries.

The United States explicitly provides in its national law that its (terrestrial) patent law also

applies in respect of space objects registered to the United States. Germany makes a similar provision in its national law.

As far as we are aware no other state, including the UK, makes a similar provision in its national law. Nevertheless, the Outer Space Treaty of 1967 and the Registration Convention of 1975 potentially provide a legal framework for enforcing patents in respect of patented inventions used on a space object registered to a state. Article VIII of the Outer Space Treaty of 1967 requires that a state that is party to the treaty and on whose registry an object launched into outer space is registered shall retain jurisdiction over the object. The Registration Convention requires that when an object is launched into outer space, a launching State shall register the space object in its registry and defines a launching State as being (i) the State which launches or procures the launching of the object or (ii) the State from whose facility the space object is launched.

It seems reasonable to assume that the jurisdiction provided by the Outer Space Treaty includes the application of a state's patent laws (although we are not aware that this assumption has been tested in a court).

Typically, obtaining a patent involves filing a patent application for the invention at the relevant patent office, and corresponding with an Examiner to establish that the invention meets the relevant requirements of patentability (e.g., it is new, non-obvious, and has an industrial use). As part of this process, the patent application is published. This is the central quid pro quo of the patent – the granting of a monopoly in return for full public disclosure. If the patent is granted, the right can last for 20 years from the filing date, providing the relevant renewal fees are paid.

Patents might be considered to have the following disadvantages over trade secrets: the invention is necessarily publicly disclosed but there is no guarantee that a patent will be granted; it can be relatively expensive to obtain and renew patents; and the patent lasts for a maximum of 20 years.

However, there are **significant advantages** to protecting inventions through a patent. For example:

- A patent provides protection even if other people later come up with the same invention independently. Further, the protection provided does not rely on any breach of confidence taking place: The granted patent will give you the right to prevent others from using the invention in the relevant territory (or, for example, allow them to use the invention in return for a licence fee).
- The protection afforded by a patent is not affected by publicly sharing details of the invention as described by the patent after the patent application is filed. This allows

a business to publicize its inventions, which can help attract investment and customers alike. This can also be helpful for collaborative activities such as technology transfer and cross licencing.

- A patent demonstrates that a business owns the rights to an invention in a jurisdiction (specifically the right to prevent others from using the invention in the relevant jurisdiction). This is often a key factor for investors looking to invest in a business, especially where invention differentiates the business from its competitors.

Accordingly, while typically costing more than trade secrets, a patent can provide a much stronger form of protection. The cost may therefore represent a worthwhile investment for businesses that derive value from their Intellectual Property.

IP strategy

When talking to businesses in the UK space sector, while many have patent protection in place for their key inventions, some have said that they rely solely on trade secrets. However, as discussed above, there are significant risks associated with this, and there are situations where doing so is simply not viable.

For example, for a business that plans on unconditionally selling a product to a customer (e.g., microwave or free-space optics communications systems, or ground equipment), a trade secret may not be a viable way of protecting an invention embodied by the product, as it may be lawfully reverse engineered by the customer.

As another example, a business may develop a technology that is used in a module of a satellite deployed in space. The business may plan on keeping the technology as a trade secret. The technology may be unlikely to be reverse engineered from the satellite sitting in space. However, getting the technology into space may involve a chain of non-disclosure agreements (for example involving component manufacturers, satellite constructors, and launch operators). The more parties that are involved in keeping the technology confidential, the higher the risk of a breach of confidence (or accidental disclosure). As above, if this occurs, there may be limited remedies available, and the technology may no longer be protected.

Accordingly, businesses developing technology in the space sector should consider filing for patent protection in states in which competitors might manufacture competing technology and/or, in the case of ground-based technology, in states in which competitors might use competing technology. Businesses developing technology that will be embodied in a space object should consider filing for patent protection in states that are likely to be used by competitors as a launching state.

One potential filing strategy is to file for patent protection in states that are major launch states or where major manufacturers or users of space technology are based, e.g, the US, Europe and China. In Europe, advantage can now be taken of the new European patent with unitary effect (the so called unitary patent) that provides uniform patent protection in multiple EU member states (initially 17).

In this way, a relatively small number of patent filings can be used to provide protection in a large part of the overall commercial market.

Of course, if a business can ensure that there will be no breaches of confidence or accidental disclosures, that their invention cannot be reverse engineered, and that the risk of competitors independently creating the invention is low, then keeping the invention as a trade secret may be a viable IP strategy.

On the other hand, patenting allows a business to obtain strong protection for their technological inventions without the risk of the protection being lost by a breach of confidence, accidental disclosure or reverse engineering (after the application is filed). Patenting provides many other benefits too (see above as well as our [previous article](#) on the patenting in the space sector). In many cases therefore, patenting plays a key role in providing a robust IP strategy for UK space sector businesses.

In practice, IP strategies for technologically innovative businesses often contain a mix of patents and trade secrets. For example, a popular strategy is to patent the key technological inventions underlying the business (and/or those which can't be kept as a trade secret) and rely on trade secrets for lower-level aspects or aspects which can't be patented.

Conclusion

Relying on trade secrets alone to protect your technological inventions can be risky, and in many cases patenting plays a key role in providing a robust IP strategy for UK space sector businesses. Developing an IP strategy that is right for your business will involve balancing the pros and cons of various forms of protection and can be challenging. If you would like advice on your IP strategy or patenting, please feel free to get in contact.