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Patents merely satisfy a professor's pride

By Andre Geim

UK inventors spend thousands with little useful purpose, writes Andre Geim

When in 2004 my University of Manchester colleagues and I discovered graphene, a material one carbon atom thick with extraordinary industrial potential, I set about trying to patent it. When I approached a representative of a multinational electronics company, I received a put-down that I recall whenever I am asked about patents. "If after 10 years we find graphene is really as good as it promises, we will put a hundred patent lawyers on it to write a hundred patents a day, and you will spend the rest of your life, and the gross domestic product of your little island, suing us."

As an executive from his main competitor told me this year: "He did not need to be rude but unfortunately this is how it works." By then I knew enough about patents to appreciate the original advice. While I was outraged by its tone, it did save the taxpayer a lot of money in costs.

This story will remain valid despite last week's agreement on a common European patent system. It also contradicts the popular perception that patents protect original ideas and bring wealth to inventors. On TV shows such as *Dragons' Den*, business gurus grill aspiring entrepreneurs about patents. Politicians demand that universities patent research. Funding agencies love patent-laden researchers. At a recent conference I attended, a professor who declared, "I have more than 60 patents," prompted a gasp from managers of funding agencies. "A real inventor, not your standard boffin. We need more like him," they must have thought. But are they right? Do we need more like him?

When I asked the professor how much money those patents brought in, he did not seem to understand my question. "We are talking about intellectual property, not money," he said. The professor saw himself as a great inventor. I saw a person who was allowed to

gamble and waste £1m of taxpayers' money.

Patenting is a multibillion dollar global trade. In the UK alone, there are about 425,000 patents in force and 50,000 new applications are filed every year. The cost per application can range from £5,000 to more than £50,000 if the patent is to be supported worldwide. Even large companies complain of the staggering costs, but for start-ups and lone inventors, a single application is a huge financial burden. Unfortunately, in their desire to protect cherished ideas, non-professional inventors are usually guided by myths about patents.

A modern patent is a subtle tool that comes in many forms, depending on the business it protects. Multinationals spend billions fighting patent wars, with armies of lawyers who are under no illusion as to the real purpose of patents: to recover research costs and defend products and trademarks. If a competitor starts suing for infringements, there is always a chance that some patents within your portfolio would allow a countersuit. Patents are also used in legal battles to bankrupt new entrants who may threaten a monopoly. It is a choice between spending on patenting today and paying legal costs and royalties later.

Small companies and individual inventors usually have little experience in patenting. Most are unaware that more than 90 per cent of patents bring no return. This means that every year thousands of UK inventors spend thousands each to buy a piece of paper that is unlikely to serve any useful purpose.

At least home-based inventors use their own money. At universities and government labs inventors can satisfy their vanity at taxpayers' expense. For intellectual property managers, this is a Catch-22. Patents are needed to build bridges with big industry and venture capital, but IP budgets allow only a few hundred pounds per academic. IP managers become expert in judging megalomania among competing academics.

The patent system has become a windmill, regularly attacked, but with little result. All we can do for now is bust those myths. Politicians must recall that Japan remains the most patent-rich country but this did not save it from a two decade long recession. Innovation is about much more than patents. As a rule of thumb, one should apply for a patent only if there is a clear route to a commercial product. Even then, there are many ways to fail – but at least the patent will not serve as an expensive memorial to your vanity.

The writer is a Nobel-prize winning scientist who was bullied into having a few patents
