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Death of Copyright – Long Live Patents

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Patents Theory

The general rule applicable in free market economies is that individuals are allowed to compete in trade using any idea that is publicly available. The monopoly rights granted by patents and other forms of intellectual property are an exception. The existence of patent monopolies have been considered justifiable for the countervailing benefits that they can bring to the economy and society at large.

The Banks Committee Report on the British Patent System¹ reported on the reforms that lead to the implementation of the current patent statute, the Patents Act 1977. It summarised the position as follows:

“The basic theory of the patents system is simple and reasonable. It is desirable in the public interest that industrial techniques should be improved. In order to encourage improvement, and to encourage the disclosure of improvements in preference to their use in secret, any person devising an improvement in a manufactured article, or in machinery or methods for making it, may upon disclosure of his improvement at the Patent Office demand to be given a monopoly in the use of it for a period of 20 years. After that period it passes into the public domain; and the temporary monopoly is not objectionable, for if it had not been for the inventor who devised and disclosed the improvement nobody would have been able to use it at that or any other time, since nobody would have known about it. Furthermore the giving of the monopoly encourages the putting into practice of the invention, for the only way the inventor can make a profit from it, or even recover the fees for his patent, is by putting it into practice: either by using it himself, and deriving an advantage over his competitors by its use, or by allowing others to use it in return for royalties.”²

As a general point, British law has always in practice treated the patent monopoly essentially as a reward to the entrepreneur for introducing a new or improved manufacture.

Why Patent?

This can be put simply. Patents should be used to develop a position free from competition, and as a barrier to entry for your competitors. More specifically:

- you should patent to ring-fence your technology:
 - Force competitors to design around your invention
 - Force them into the expense of developing their own technology

¹ Cmnd.4407, 1970

² Cmnd.4407, 1970, paragraph 1

- Force them into worse or more expensive technology
- Defend against appropriation by competitors/stop them or force them into taking a licence
- Obtain financing from investors
- Generate a revenue stream: licensing and technology transfer

Patents can be extremely profitable. This is illustrated by the following figures.

- In 1999 the US economy had a trade deficit of a record \$339 billion. Its IP licensing revenue brought in \$37 billion from abroad.
- In 2002 IBM earned \$1.15 billion in licensing royalties from its patent portfolio alone.
- According to PricewaterhouseCoopers, in the last ten years US patent licensing revenues have increased from \$15 billion to \$110 billion.

The advantages and benefits from patenting are self-evident. Less appreciated, but of crucial importance in high technology industries, is the challenge posed to intellectual property (and especially patents) by rapid technological advance. Copyright and related rights have traditionally been seen as the way to protect rights in the geographic information sector. Whilst copyright still undoubtedly has a central role to play, digitisation, electronic delivery of mapping data and the growth of the Internet have irretrievably altered this. Patents will now dominate.

Intellectual Property Rights are constantly destabilised by technical advances. Patent law originally evolved around machines and chemical processes. But as new technologies such as electrical engineering, microbiology and biotechnology have emerged, it has had to evolve. The rapid advances in technology have stimulated the strongest demand for intellectual property. Thus the early computer industry used no more than secrecy and contractual provisions to protect itself and its intellectual creations. This complacency was shaken by the new markets and opportunities opened by the arrival of the desktop computer with its immense capacity to copy programs and data. The computer industry suddenly became aware that the gulf between development costs and the costs of copying meant that proper intellectual property protection was an absolute.

Current advances in computing, telecommunications and other high-tech areas typically require massive investment. But, all suffer by being able to be copied by others cheaply, quickly and effectively. These drivers make the case for an extension of the ambit of patent rights irresistible. Thus in the US software has been patentable for over 20 years³ and the final objections to business method patents were removed in 1998⁴ (although such methods have been patentable in principle for many years). In Europe, amendments to the European Patent Convention were approved in autumn 2002 to regularise the grant of software patents (amendments to the European Patent Convention to permit business method patents was considered, but rejected, opening a gap with the position in the US). Draft proposals for amendment of the UK Patents Act are in circulation, but the UK is now 6 months late in complying with the implementation timetable. Only Denmark has done so.

³ *Diamond-v-Diehr, 1981*

⁴ *State Street Bank & Trust-v-Signal Financial Group*

The Rights Granted Under UK Law – What is Patentable?

The rights granted under UK and European law are, essentially, identical. The applicant must make proper disclosure of the invention and specify the limits of the monopoly claimed. In order to be granted a patent section 1(1) of the Patents Act 1977 requires the following conditions to be satisfied:

- the invention is new;
- it involves an inventive step;
- it is capable of industrial application; and
- it must not be excluded matter (e.g. offensive, immoral or anti-social, or relate to biological reproductive processing).

There are some things that are excluded inventions under section 1(2), namely:

- a discovery, scientific theory or mathematical method;
- copyright works;
- a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer; and
- the presentation of information.

But, these things are excluded only to the extent that that patent or application relates to “that thing as such”. These last words are the door through which it is possible to patent computer software, despite an apparent clear refusal on the face of the legislation to contemplate this. This section will shortly be amended to conform with the recent changes made the European Patent Convention.

Under the current state of the case law the question one has to ask is what is the effect of the invention, not what are the words used to draft it. It is trite law that one cannot patent a discovery, but if you can tell people how they can usefully employ it, then a patentable invention may result. Broadly, the European position is that what is required is some technical advance on the prior art in the form of a new result. One then has to consider whether the invention has technical character. If technical considerations were required to arrive at the invention, then this may give sufficient technical character for it to be patentable.

The Rights Granted Under UK Law – Infringement

The monopoly rights granted by a patent are dealt with in section 60 of the Patents Act 1977. This sets out a code on infringement derived from the European Patent Convention, and designed to conform with the various international treaties to which the United Kingdom is a signatory⁵.

The following things are the primary acts of infringement of the monopoly rights granted to a proprietor if done without the consent of the proprietor.

- Where the invention is a product, the making, disposing of, offering to dispose of, use or importation of the product, or keeping it whether for disposal or otherwise.

⁵ The European Patent Convention, the Community Patent Convention, and Trade Related aspects of Intellectual Property Rights, including Trade in Counterfeit Goods (TRIPS)

- Where the invention is a process, using the process or offering it for use in the UK when that person knows (or it is obvious to a reasonable person in the circumstances) that its use in the UK without the proprietors consent would be a infringement.
- Where the invention is a process, disposing of, offering to dispose of, using or importing any product obtained directly by means of that process, or keeping any such product whether for disposal of otherwise.

These rights are wide-ranging. It is exceptional for a defendant to be able to argue successfully that what it has done is not covered by one of these provisions⁶. In addition, there will be secondary infringement through supplying or offering to supply third parties with any of the means (relating to an essential element in the invention) for putting the invention into effect knowing (or it being obvious to a reasonable person in the circumstances) that those means are suitable for putting, and are intended to put, the invention into effect in the UK.

There are a number of acts which are expressly stated not to constitute infringement⁷. So far as the geographic information sector is concerned, these will be primarily:

- acts done privately and for purposes which are not commercial, and
- acts done for experimental purposes relating to the subject-matter of the invention.

The first exemption covers acts which are both private and do not have a commercial purpose. "Private" in this context means acts not carried out in public and for the person's own use and benefit. In contrast, someone who supplies or offers to supply a private non-commercial user will not be protected by this provision, and will be liable for infringement. Thus, an ordinary member of the public using an online mapping system to look up a London street name because that individual has to go there to meet friends will not be infringement, but anyone who offers such facilities as a service to members of the public will be infringing.

The exception for acts done for experimental purposes speaks for itself: Acts are an "experiment" if they seek to generate genuinely new information and the act is not an experiment if it merely seeks to verify existing knowledge. It should also be noted that there is no reference here to the experimental work not having a commercial purpose. Thus an act exempt under this provision may have in view an ultimate commercial purpose.

The Multi-Map Patent Issue

The European Patent granted to Multi Media Mapping Limited exemplifies the risks and opportunities to companies in the geographic information sector. This patent has been granted throughout the EU and in the US, as well as applications pending in various other countries worldwide. It is for "a computer system for identifying local resources".

⁶ The Court of appeal has recently (May 2002) decided in *Sabaf SpA-v-Meneghetti SpA* (in which Field Fisher Waterhouse acted) that importation should be viewed on a sale of goods basis, so if the importer does not own the imported goods then it cannot be liable for importation. This is currently being appealed to the House of Lords, as it flies in the face of law on importation in relation to other intellectual property rights (notably trade marks).

⁷ Section 60(5)

This is a beguilingly unassuming title, but the abstract of the patent gives a good general overview. The invention works as follows. A map of an area is requested by a client's computer from a map server. Information relating to a place of interest is requested from an information server by the client computer (e.g. where is the nearest McDonalds, Hilton Hotel or bank?). This information is superimposed on a map image at a position on the map image corresponding to the location of the place of interest on the map. The information (or "overlay") server may contain details of, for example, hotels, restaurants, shops or the like, associated with the geographical coordinates of each location. The map server contains map data, including coordinate data representing the spatial coordinates of at least one point on area represented by the map.

The legal scope of the monopoly granted by this patent is set out in the claim 1, which is as follows:

- "1. a method of operating a computer system, the method comprising the steps of:*
- storing on a map server computer (11) map data representative of a map of a geographical area;*
 - storing on the map server computer (11) coordinate data indicative of the spatial coordinates of at least one point associated with the geographical area represented by the map, so as to enable correlation of points on the map with their corresponding geographical location;*
 - storing on an information server computer (12) information data relating to at least one place of interest within the geographical area, said information data including data representative of the spatial coordinates of the place of interest within the area;*
 - transmitting a map request to the map server computer (11) from a client computer (10), and transmitting from the map server computer (11) to the client computer (10) in response to the map request the map data and the coordinate data associated with the area represented by the map;*
 - utilising map data to display an image of the map on a visual display unit (1) associated with the client computer (10);*
 - transmitting an information request to the information server computer (12) from the client computer (10), and transmitting from the information server computer (12) to the client computer (10) in response to the information request the information data relating to at least one place of interest within the geographical area; and,*
 - displaying the information data relating to at least one place of interest on the visual display unit (1)."*

Infringement is determined by construing the claims and specification of the patent (including any drawings) to determine whether the method in question falls within the integers of the claims. If each and every integer of the relevant claim is not present, then there will be no infringement. Broadly, the test that will be applied is whether persons with practical knowledge and experience in the relevant field would understand that strict compliance with a particular integer was intended to be an essential and material requirement of the invention. In this instance the method claimed in Claim 1 has seven steps. Compliance with each is strictly required, otherwise the method claimed simply does not work.

The Multi Media Mapping patent appears to patent the entire breadth of the art of Internet mapping. This patent therefore has potentially a fundamental effect on the geographical information industry as a whole. Not only do a number of existing products from a number of providers appear to fall within its claims, but its very continued existence is an absolute bar on any future product development in this direction, unless the product provider is prepared to pay potentially significant licence fees to Multi Media Mapping for the remaining life of this patent (until August 2015).

The Multi Map patent is a major threat to the geographical information industry. The breadth of claim 1 and what is meant by “place of interest” in it are simply so broad that this covers precisely the sort of Internet mapping services and products currently being offered across the geographic information sector. In addition, those suppliers of Internet map platforms and map coordinate translation programs will also be infringing this patent because this will constitute the supply of the means relating to an essential element of the invention for putting that invention into effect.

We have considered the validity of this patent and, without descending into detail, have the following views:

- The patent essentially automates a process which would otherwise have been carried out by the user referring to a map (whether paper or online) and a telephone directory or gazetteer to identify, say, the nearest branches of McDonalds, and then identifying that place of interest on the map. This patent is therefore essentially the automation of a manual process that does not in itself have any technical effect other than the well-known use of the Internet, electronic mapping overlays, and coordinate data.
- We have identified prior art pre-dating the patent which anticipates the entirety of the Claim 1, with the result that Claim 1 of the patent is invalid. The other subsidiary claims of the patent are either obvious and/or are anticipated by this prior art as well, with the result that the remainder of the patent is also invalid.

So what should be done about it, and why? The short answer is that if it is invalid, then steps should be taken to revoke it. But as this requires someone to step forward and bear the costs of doing so, there is undoubtedly an element of waiting to see how the industry as a whole will react. Unfortunately, until a court actually revokes the patent the status of this patent is still that it is valid and in force. This means that the geographic information sector has to assess the extent to which their own products fall within its scope, and has to ensure that this fact is properly dealt with internally, in information given to shareholders and stock exchanges (as appropriate), and in reports to government (if the products are being offered by a governmental agency or equivalent). The prudent organisation will also need to disclose the existence of this patent in any attempt to raise finance, and will have to craft appropriate warranties when licensing their own products to third parties (who will expect to be wholly indemnified). The potential difficulties and costs involved in complying with these kinds of prudent and responsible steps should not be underestimated.

But perhaps the real lesson to be learned from the Multi Map patent is that the day of the patent in the geographic information sector has now unarguably arrived. Patents are the Queen of the battlefield. Nothing can stand before them. Every sensible organisation in the geographic information sector should be patenting their inventions and improvements. This is especially the case if they are contemplating carrying out business in the US, given the wider protection that the US confers by patent, covering not just software-related inventions but business methods as well. The geographic information sector is now as much an IT-based sector as anything else, and should be seeking to emulate the same patenting strategies as the likes of IBM. The opportunities are there. Organisations that make significant breakthroughs can expect to dominate the geographic information sector in a way undreamt of a few years ago.