

Gowers Review of Intellectual Property: response from the University of Southampton

The changing nature of Universities

Through a variety of Government initiatives such as Higher Education Innovation Funding and going as far down as the terms and conditions under which Research Councils fund research Universities are being required to focus on IP commercialisation and undertaking research where exploitable IP could be generated. This creates an environment whereby Universities have to be increasingly careful about management and protection of IP whilst at the same time balancing with the requirement on them to publish and disseminate knowledge and be open institutions of research and teaching. This has the following consequences:

- 1) **Open Institutions and third party claims:** Industry has long suffered from third party claims on IP ownership and protects itself by tight control of communication of information from third parties.

This method of protection is not compatible with the open nature of a University, leaving a University exposed to claims from third parties. This University has had protracted, ongoing and expensive litigation by third parties resulting in one case from a telephone cold call to an academic and in another through a non-disclosure agreement entered into under a subterfuge by the third party and both asserted a number of years after the event. The interpretation of the Law by the Patent Office and the Courts has not helped the situation leaving the University caught between a licensee and a third party claimant. It is also apparent from comments made during the hearings by the Patent Office and the Courts that this new role set out by Government for Universities has not yet been fully appreciated and Universities have often been seen as interfering in industry's exploitation of research.

Recommendations: A review of Patent Law and the new commercially active role Government is requiring of Universities is needed to ensure that Universities can fulfil this new role without being incurring unreasonable risks from their need to be an open institution.

- 2) **Conflict of protection vs publication:** One of the inhibitors to pursuing patent protection for Universities is the need to maintain strict confidentiality. In order to be able to discuss an idea that is potentially patentable one needs to consider making a filing. The importance of the first filing is such that this incurs costs and delay. It also floods the Patent Office with many more applications than are finally worth pursuing.

We would therefore appeal for grace period as is practiced in the US. This permits wider discussion of the idea without having to attempt to enforce confidentiality agreements. Also, in the context of university research, it allows parallel publication and potential pursuit of a patent. The filing will therefore be

more robust because of the testing opportunity by peers it will receive. It would be further improved by first to conceive principle supported by appropriate evidence.

It is possible that those in the IP legal industry have not been keen on grace time because it could result in lower volumes of business. From the innovators perspective, grace time provides a very useful window where an idea can be tested prior to engaging professional advice.

Recommendation: The introduction of a grace period should be reconsidered

- 3) **IP Rights in Government sponsored commercial research:** Industry for many years have understood IP is an asset that should be protected, developed & utilised. UK Universities are increasingly beginning to think the same way, as they should. To some extent therefore Universities are becoming competitors to industry in respect of IP.

At the same time Government is seeking to encourage Collaboration between Industry and Academia, often with the requirement for multi party projects such as under the DTI Technology Programmes. Inevitably this creates a conflict between the parties concerned increasing the need for protracted negotiations on research collaboration agreements. Navigation through the conflicting interests of Industry over confidentiality, exclusive rights for exploitation or even ownership and Academia with the need to continue with the ability to undertake further research and their obligations on publication and dissemination, is often time consuming and problematic. The cost to both Industry & Academia to negotiate such agreements is becoming onerous. While the Lambert Framework Agreements have helped they are not widely accepted by industry and they only offer a range of possible options between full ownership by the University and full ownership by the commercial partner

With the increased initiative of collaborative research joint IP is becoming more common. Here Universities are at a disadvantage as they are unable to exploit the IP generated under a collaborative project directly. Any exploitation, through licensing or formation of a Spin-out company, would require the prior consent of the commercial partner.

Recommendation: Clear guidance is needed on specific Government funded collaborative programmes as to the expected IP ownership.

- 4) **Research Exemptions:** It has long been considered that non-commercial research activity such as is carried out by Universities under Research Council Funding, can be carried out without concern for patent infringement. However the recent US decision on *Madey vs Duke University* and letters sent to many Universities by some commercial organisations raise unanswered questions of the status of academic research in respect of IP infringement.

Recommendation: Clarification of the freedoms of academic institutions to undertake research without fear of IP infringement is required.

Specific Issues

A University of Southampton experience – the EDFA Patent

The Erbium Doped Fibre Amplifier (EDFA) was invented at the University of Southampton, in the mid 1980s, by a group led by Professor David Payne, CBE FRS. The invention of the EDFA was the catalyst for the rapid development of fiber-optic telecommunication networks in the 1990s. The importance of the invention has been widely recognised by the academic community, receiving a number of International awards, including in 1998, the prestigious Benjamin Franklin Medal (USA) being awarded to David Payne. Despite this widespread recognition of the technological importance of the EDFA, University of Southampton has been unable to secure a meaningful IP protection for this invention. The very long time taken for European processing of the patent application resulted in loss of significant IP. The priority patent application was filed in the UK Patent Office in August 1985, and secured a European filing date of August 1986. It was not until 16 years later, in October 2001, that the European Patent Office issued a decision to grant, which it subsequently reversed in 2005. During this period the patent landscape changed considerably. Interpretation of changes in patent law meant that the European application was not entitled to claim the earliest UK priority date. The case had been in opposition since 2002, until the University decided to abandon the case in April 2006 as the Patent would expire before a resolution could be reached in the EPO. The protracted dealings with the EPO have resulted in loss of IP rights for which substantial royalty payments should have been collected for use in a components market measured in billions of dollars.

Use of electronic information in establishing IP creation

Nowadays much of the evidence for conception and diligence is electronic (e.g. the output from analysis instruments). Traditionally, such evidence is expected as paper records (log books). There needs to be some guidance on the acceptance of electronic evidence so that the trace of an idea can be robustly demonstrated.

Recommendation: Work has been done on the use of cryptographic hashing (which underlies electronic authentication) which could provide such evidence. Networks of disinterested third parties need to be involved in collecting the hashes and propagating them. To be 'disinterested' means not having any financial relationship with- or knowledge of the users. Such a system probably needs to be publicly operated, directed by patent offices. Integrated with the formal patent system this could provide a powerful protection method.

Open Source Software

Software often only has copyright as its means of asserting IP. The software community has long recognised that this is a weak form of protection and the open source community 'turned this on its head' by attributing but not asserting ownership of copyright to enable further development. The result is a fair dealing arrangement whereby the community benefit from each other. However, some defence is still required to ensure that infringers are penalised (globally). Because the evidence is

electronic data, some means is needed in order that a software community can track its collective property (see above). Some fast-developing economies do not have cultures that understand the open source concept. The protocols need to be internationally recognised since open source are international endeavours where all participants need protection against those who are not dealing fairly.

The open source community are pioneering an approach where it is the “manipulation” of the property (the skill in changing or executing the material) which generates value rather than its mere possession. There are parallels between this and popular music artists releasing their music freely in order to promote their live performances, which are often more profitable.

Open Source software is increasingly seen as a way of doing business, not just a philosophy. The open source model can allow different agendas to co-exist. A major barrier to business-oriented open source agendas is the widespread culture of downloading, which makes it very hard to avoid IP contamination. Within a business, this is a matter of ensuring that appropriate policies and procedures are set out and adhered to. However, very little software is truly developed from scratch, most builds on previous work, and it is often next to impossible to ensure that some existing open source software one might wish to use is free from IP contamination. The challenge is about education and culture, not IP law. If we accept that the downloading of IP and its incorporation into other works is culturally inevitable, we should consider building on the concept of Copyleft (see e.g. <http://en.wikipedia.org/wiki/Copyleft>) to create an IPR that is more appropriate to the download generation.

Software Patents

We were delighted when the European parliament decided against software patents, but the issue is still a major one. There are many arguments against software patents. One key one is as follows. As noted above, very little software is truly developed from scratch, most build on previous work. It is completely impractical to undertake a world-wide patent search every time a significant change (whatever that may mean!) is made to a piece of software, yet there is always the risk that at some point some aspect of the evolving software crosses a threshold and becomes infringing of a patent. It is quite clear to us as professional creators of innovative software that copyright is the correct IPR and patenting is entirely the wrong IPR.