Computer related and business process inventions

Can computer programs be patented?

The UK Patents Act 1977 specifically excludes computer programs. It may therefore come as a surprise that many computer related inventions have gained patent protection. This is because the rules have been clarified and are taken to mean that whilst a computer program *per se* cannot be patented, applications that contain a computer program are patentable provided that they make a “technical contribution”. This is known as the technical effect doctrine – there is currently great confusion as to what constitutes a technical effect (following the Macrossan case) but it is generally thought that providing the software / algorithm is used for a specific technical outcome and is not the main focus of the patent, the invention may be patentable.

For example, this has been taken to mean that whilst a machine for alerting engineers to worn parts was technical (and thus patentable) but a machine that built hybrid models was not patentable, as it simply speeded up something which had previously been done by hand. The best way to think of this is to imagine the problem that has been solved by the invention – if this is technical then potentially patent protection may be sought.

In the UK, software is judged as to whether the contribution (i.e. solving the problem) is solely in excluded categories, such as business methods or presentation of information. If this is the case then the software is unpatentable. The UK courts have a tendency to construe these ideas very narrowly – it may be more productive to file at the European Patent Office instead, as the technical operation of an algorithm or piece of software may potentially be patentable.

In the US, potentially any invention can be patented provided that it is not new and not obvious. This has been demonstrated recently, with patents being granted for computer software, although the position the courts will take should any of these be litigated is unclear.

How else can software be protected?

Computer software in the form of code can also be protected as a literary work under copyright. This can apply to source code, assembly code and object code. Therefore actions that apply to literary works also apply to computer software and code. For example, in relation to a literary work, it is an infringement of copyright to:

- Copy: this is not just word for word copying, but can mean when a substantial portion or flavour of the work is taken. This can be an excellent way of protecting code. Because running a piece of software usually means copying it, even for a short amount of time, this is also a good way to prevent the use of it by anyone other than the copyright owner, or those with their permission.

- Adapt: In relation to computer programs it means an alteration of a program or a translation into another language. A translation means a conversion into or out of a computer language or code.
• To lend or rent the work to the public

• To issue copies to the public: therefore copies of the software cannot be given out to the public or left on a website where it could be accessed by the public

Copyright does not however protect an invention where another party has produced a similar invention independently. For example, a computer code is not protected against another party writing a code that results an identical outcome where they have done this independently. This demonstrates the fundamental difference between copyright and patents; patents give protection against independent creation, whereas copyright only gives protection against literal copying.

Copyright protection lasts for 70 years from the death of the author and so this can be seen to a considerable level of protection. In the US registration of copyright is available; in all other countries there is no registration system for copyright.

Are there any limitations to the copyright provisions?

Copyright is an excellent means of protecting software although there are some limitations. Once a user has purchased a piece of software, or lawfully been given access to it, he has certain defences against the actions that would normally be classed as infringements:

• Copying: If it is necessary for his lawful use, a Lawful User may copy or adapt the software, or make a backup copy of the software

• Decompilation: This is also allowed provided that it is necessary to create a program that can be operated with that program and that the information is not used for any other purpose

• Testing: a user may examine and test a program to examine its underlying principles and by doing so will not infringe copyright if this involves the copying of a program as a result of the installation, loading or running of a computer program

Therefore, providing the user can show that he falls within these (and a few other very limited examples) he may be able to use the software in a way which would otherwise infringe the copyright of the owner.

Are there specific provisions for databases?

In recognition of the importance of databases, a new set of legislation was introduced to enhance the protection of databases. The database right offers protection to "collections of independent works, data or other materials that are arranged in a systematic or methodical way and are individually accessible by electronic or other means" where there has been substantial investment in obtaining, verifying the contents of a database. This investment is not necessarily finance related and may instead be due to human or
technical resources – however, whether the investment if directed at another goal can justify this so called sui-generis right is another question e.g. can investment in deciding the times of TV programs justify the database right in the programme listing? At the moment the exact level of protection given to databases is still very much under discussion in the courts.

The protection lasts 15 years from the date of completion of the database, but where it is made available to the public before the end of the 15 years, the rights expire 15 years from when it was first made available to the public. Therefore giving a maximum potentially of 30 years. However, a loophole here is that where the database is “dynamic” in the sense that there are substantial additions, deletions or alterations (where there is new investment in the database) the protection time will begin again and thus a new period of protection will start. It can be envisioned therefore that certain databases will enjoy a rolling period of protection. However, there are difficulties in deciding what a substantial change is, and this has yet to be clarified by the courts.

Can Business or Financial Methods be patented?

The US approach is to agree in principle to patents for business methods, provided that they are non obvious and new. By contrast the EPO will not patent pure methods of doing business, unless there is some kind of technical effect, for example, the mere transfer of an existing idea or business method to use via the internet would not be sufficiently technical to gain patent protection at the EPO, but may gain protection in the US. This is also the case with Financial Methods.

How can UCLB help protect my invention?

UCLB has a team of people with experience in protecting computer-related and software inventions. They can advise on the patentability of the invention or whether another form of intellectual property would be more suitable, such as copyright protection or the database right. They can also advise on licences for software or other inventions, and how to ensure that the software is used in accordance to the provisions of the licence.