



Patenting AI and software innovations

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# Patenting AI and software innovations

Many start-ups are underpinned by software innovation, whether or not they are expressly a tech start-up. Even in the current disruption, software innovation continues at pace, with typical software development workflows able to continue despite lockdown measures, in a way that may not be possible in sectors that rely on labs or workshops. Of course, the disruption can also provide opportunities for innovation itself, for example, in terms of increased interest in remote-working and collaboration software.

In this post-COVID world, the pragmatic approach to protecting software innovation is arguably being affected, however, the devices and methods of protection have of course not changed. There are two main IP rights that can protect software inventions: copyright and patents.

## Copyright

Copyright protects source code of software, which is treated by copyright law along the same lines as a work of literature. Copyright infringement occurs where a substantial part of the source code is copied from the original source code.

The protection provided by copyright is relatively narrow, as copyright protects the code itself, not its underlying functionality. A program delivering the same functionality along the same underlying principles, but structured differently, would be unlikely to infringe copyright.

## Patents

Patents can provide broader protection that abstracts away from the underlying source code and protects the software at a functional level. However, not all types of software inventions are patentable, and the legislation and case law defining what is patentable differs between jurisdictions.

Whilst this might paint a complicated picture, the patentability of an invention generally turns on the underlying problem that the software addresses, and whether that problem is a “technical” or business consideration.

The following are some broad guidelines that may help indicate whether or not a software invention is likely to be patentable:

### Interaction with hardware beyond a computer

In most instances, software that controls hardware in order to achieve some improvement in the operation of that hardware will be patentable. This includes methods of controlling devices such as driverless vehicles, 3D printers, Internet-of-Things devices, and so on.

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## Processing sensor input

Devices that interact with the real world by process sensor input, including images, are likely to have a patentable dimension. Examples include medical image or CCTV image processing, the processing of 3D scanner data; and the processing of sensor data to detect error conditions in the automotive or aeronautical fields.

## Improved security

Software solutions aimed at improved security tend to be patentable. These can be broad (e.g. a new cryptographic technique), or application-specific (a new way of verifying a user or establishing that a printer cartridge is genuine).

## Disk storage, compression, network traffic

Similarly, inventions that clearly relate to improved resource utilisation, such as disc storage structures, compression techniques and codecs, network routing and cloud computing infrastructure are likely to be patentable.

## Accountancy and finance software, and ways of organising people

Whilst cutting-edge finance platforms may include patentable aspects, in general, software that implements a business method, a financial transaction or operation (e.g. generating a cost estimate) or relates to organising people (e.g. teaching or coordinating social activities) will be difficult to patent.

It is helpful to consider the role of the software developer in the invention. If the problem the invention addresses was solved by the input of a salesperson, marketing executive, finance manager or accountant, and the developer simply implements the software to carry out that solution, the invention is unlikely to be patentable. If, on the other hand, the invention arose from a technical difficulty with the software and could not have been solved by a business person without technical skills, it may indicate a patentable development.

## Websites and other user interfaces

Typically, a new website or other user interface will not be patentable, if the improvement relates to the aesthetics of the interface.

We hope the above guidance helps you understand whether patent protection is likely to be appropriate for your business. Of course, the guidance is not comprehensive, and we are always pleased to assist clients in navigating this complex area of the law.

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