

Common obstacles faced by US software patent applications

Generally speaking, there are four main requirements for an invention to be “patentable”. It must be:

1. Novel (not previously disclosed or used)
2. Inventive (not obvious with respect to what is already known)
3. Useful (most inventions meet this criteria, as a low threshold is applied)
4. “Patentable subject matter” (fall under a recognised category of inventions which can be patented)

Inventiveness and “patentable subject matter” objections are the most-common obstacles to the granting of software patents, both in the US and abroad.

Inventive Step Objections

If a method or process which is already known is merely applied on a computer, patent examiners may raise “inventive step” objections. Whether something is obvious or not is a judgement call made in light of what is known in the field of the invention (“the prior art”). It is possible to overcome such objections with legal arguments and/or amendment of the patent claims.

Patentable Subject Matter Objections

In the US, patents can be granted to any “new and useful process, machine, manufacture, or composition of matter”.

However U.S. courts have developed a number of “exceptions” for things which are not patentable. In particular “abstract ideas” are not patentable. Some software related inventions may be related to abstract ideas. The Supreme Court in Alice recently held that:

"merely requiring generic computer implementation fails to transform [an] abstract idea into a patent-eligible invention."

Therefore, the US Patent Office asks the following questions when examining whether software is patentable:

1. Is the claim directed to a “process, machine, manufacture, or composition of matter”? Software claims can usually be framed as a process or a machine (e.g. a computer).
2. Is the claim directed to an abstract idea?
3. If the invention is directed to an abstract idea, does the claim as a whole amount to “significantly more” than the abstract idea? If the answer is “yes”, then it is “patentable subject matter”, even though the claim may involve an abstract idea.

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Here are some examples of non-patentable abstract ideas:

- Contracts, legal obligations and business relations - e.g. a series of steps or acts, for providing a performance guaranty
- Social activities and human behaviour – e.g. The steps of managing a game of Bingo, including for example inputting and storing two sets of Bingo numbers, assigning a unique player identifier and control number, and verifying a winning set of Bingo numbers.
- Advertising, marketing, sales – e.g. The concept of using advertising as an exchange or currency
- Mathematical relationships/formulas- e.g. Gathering and combining data by reciting steps of organizing information through mathematical relationships
- The “basic tools of scientific and technological work”

The guiding principle the USPTO applies for claims directed to such abstract ideas is “whether the **claim as a whole** amounts to **significantly more** than an exception.” The USPTO must consider all additional (non-abstract idea related) elements of the claim both individually and in combination.

For example, claim limitations which improve another technology or technical field, or the functioning of the computer itself may constitute “significantly more” than the abstract idea itself. On the other hand, the mere application or implementation of an abstract idea on a computer is not enough in itself to make an abstract idea patentable.

In summary, whether a particular software invention can be patented is not a black-and-white matter, and depends on how the patent claims are framed, the details of the invention, “the prior art”, applicable case law, and other factors.

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