

FACT SHEET

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Software Patents

Patentable Subject Matter and Computer-Implemented Inventions. A patent provides an exclusive legal right to an invention for a limited period of time, in exchange for public disclosure of that innovation. The U.S. Constitution grants Congress authority to grant patents. As with other property rights, patents may be sold, transferred, or licensed for a third party's use.

Not everything is patentable. To be patentable in the U.S., an innovation must be new, non-obvious, and useful. And the innovation must involve a practical application of technology in the real world, not just an abstract mathematical concept, law of nature, or idea. This gives rise to controversy as to whether innovations embodied in software should be patentable. However, software innovations are generally patent-eligible in virtually all countries with a modern patent system today. Some jurisdictions require software-based inventions to be claimed in combination with hardware or that they have a “technical effect,” (such as improving the performance of a computer).

In addition to the many academic works asking whether software patents are “good” or “bad,” many empirical studies investigating trends in software patenting ask how such patents are used and what types of entities seek software patents. The vast majority of software patents (around 75%) go to manufacturing firms, with only a small fraction (less than 7% in one study) going to software companies, showing that the economic effects of (and commercial interest in) software patenting reach far beyond the software sector.¹

¹ Bessen & Hunt, The Software Patent Experiment (2004); Bessen & Hunt, An Empirical Look at Software Patents (2004).

Overview

These issues often arise in discussions of patentable subject matter and software:

- What constitutes a software patent? Some suggest that almost any patent on an invention implemented by a computer is a software patent. Others would limit patents to inventions entirely embodied in software or on the software itself as software patents.
- What is the role of software patents in spurring innovation? Comparing innovation in the United States, Israel, India, Europe and other regions scholars assess the role of software patents in development. Additionally, investors rely on patents in determining whether to invest in new ventures, and innovators utilize patents to bargain over their rights with producers and distributors.
- The scope of patent protection varies. In most countries it is intentionally broad. Studies find that countries with strong software industries tend to provide broad protection for software. However, failing to distinguish clearly between software patents and patent business methods implemented by computers, such as patents on financial models, has some asking whether business methods or software should be patentable.

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- The effects of the U.S. Supreme Court *Bilski* decision on the patentability of both software and business methods leave the exact contours of patent-eligible subject matter uncertain. The Supreme Court did not categorically bar business method patents, but it emphasized the rule that “abstract” subject matter is not patentable. This suggests that patents on both software and business methods in the U.S. may be harder to obtain in future.
- Within the open source software community, some argue that software should be protected *only* by copyright. Many proprietary software developers believe that categorical exclusion or discrimination against computer-implemented inventions is inappropriate.
- With a significant backlog in software and computing patent applications in a fast-moving industry (up to 40 months from submittal to initial consideration), many ask whether the U.S. and other patent offices have the resources needed to examine applications in a timeframe commensurate with the relevant commercial life of much software.
- Software patents are often criticized for being vague, as software innovations must be described in functional, rather than physical, terms. Discussions arise about how to clarify such patents by increasing the specificity of claims or by tying them more closely to real-world processes and technologies.

Software Patent Sources

These sources are a good place to start in understanding issues with patentable subject matter and software patents. John Allison, Abe Dunn and [Ronald Mann](#) warn that software patent skeptics’ outlook may not be objective, but stems from their choice of business model, in “[Software Patents, Incumbents, and Entry](#).” [Robert Merges](#) concludes that software patents have done more good than harm in “[Patents, Entry and Growth in the Software Industry](#).” Martin Campbell-Kelly also takes a positive view in “[Not All Bad: An Historical Perspective on Software Patents](#).” [Pamela Samuelson](#) expresses skepticism about software patents in “[Revisiting Patentable Subject Matter](#).” [John Duffy](#) looks at the consequences of getting rid of software patents in “[The Death of Google’s Patents](#).” [Rebecca Eisenberg](#) relates how living things became patentable in “[The Story of Diamond v. Chakrabarty: Technological Change and the Subject Matter Boundaries of the Patent System](#).”

Please note that all links on this fact sheet are accessible from the online version at www.techpolicy.com/softwarepatents.aspx.

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