SUBJECT MATTER ELIGIBILITY AND BUSINESS METHODS

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To be entitled to a patent, an invention must be more than just innovative, it must also be directed to subject matter that is "patent-eligible". At one time, rejections of applications as being directed to ineligible subject matter were relatively rare. However, since the Supreme Court issued the *Alice* decision, this requirement has taken center stage for many types of software-enabled inventions.[1] Applications directed to computer implemented business methods have been hit particularly hard as the United States Patent and Trademark Office (USPTO) and United States Court of Appeals for the Federal Circuit ("Federal Circuit") struggle to determine what is patent-eligible under *Alice*.

Evolution of the Law with Respect to "Business Methods"

35 U.S.C. § 101 provides that any new and useful process, machine, manufacture, or composition of matter is patentable. However, the courts have long recognized three exceptions to these four broad categories of patentable subject matter. These judicial exceptions are laws of nature, physical phenomena, and abstract ideas. Prior to the widespread use of computers, the position of the USPTO was that "methods of doing business" fell into these exceptions, and were therefore not patentable subject matter. This was often referred to as the "business method exception".

On June 23, 1998, the Federal Circuit issued a decision rejecting the business method exception.[2] The *State Street* decision effectively expanded the scope of patent-eligible subject matter to include computer implemented methods of doing business so long as the method produced "a useful, concrete and tangible result." Following *State Street*, the USPTO experienced a large increase in the number of patent applications filed with claims directed to computer implemented business methods. Some well-known patents that issued from these applications were later criticized as being overly broad and vague, or for claiming methods of doing business that were already known and widely used.

The eligibility pendulum began to swing back in 2008 when the Federal Circuit determined that a computerized method of hedging risks was not patentable subject matter.[3] The Supreme Court later affirmed the Federal Circuit's holding in *Bilski* in what was the first of a series of cases in which the Supreme Court addressed the scope of patentable subject matter under 35 U.S.C. § 101.[4]

On June 19, 2014, the Supreme Court handed down the *Alice* decision, which is the most recent Supreme Court decision on patent-eligibility. Drawing on previous Supreme Court decisions, *Alice* sets forth a two-part test for determining if a claim is directed to patent-eligible subject matter. First, the Examiner must "determine whether the claim as a whole is directed to a judicial exception" such as an abstract idea. If the claim is directed to a judicial exception, the Examiner must consider whether "the elements of each claim both individually and 'as an ordered combination' . . . 'transform the nature of the claim' into a patent-eligible application" of the judicial exception.[5] The Court describes this second step "as a search for an 'inventive concept' . . . that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'"[6]

The Alice Test - Step 1

The Supreme Court and the Federal Circuit have declined to define abstract ideas other than by example. However, most inventions held to be ineligible abstract ideas by the courts fall into one of four broad categories of abstract ideas:
(1) fundamental economic practices, (2) methods of organizing human activity, (3) an idea of itself, and 4) mathematical relationships/formulas.

Fundamental economic practices include concepts relating to the economy and commerce, such as agreements between people in the form of contracts, legal obligations, and business relations. Specific examples include mitigating financial risk, pricing a product, and resolving financial obligations.

Methods of organizing human activity involve concepts relating to interpersonal and intrapersonal activities. Examples include managing relationships or transactions between people, social activities, and human behavior; satisfying or avoiding a legal obligation; advertising, marketing, and sales activities or behaviors; and managing human mental activity.

The "idea of itself" exception covers ideas that stand alone, such as an un-instantiated concept, plan or scheme, as well as a mental process (thinking) that "can be performed in the human mind, or by a human using a pen and paper". Examples include collecting, organizing, storing, comparing, transmitting, and displaying information, and using rules to identify options.

Mathematical relationships/formulas include concepts such as algorithms, mathematical relationships, formulas, and calculations. Specific examples include a formula for updating alarm limits, a mathematical procedure for converting one form of numerical representation to another, computing a price for the sale of a fixed income asset and generating a financial analysis output, and an algorithm for calculating parameters indicating an abnormal condition.

The Alice Test - Step 2

To understand what is required to satisfy step 2 of the *Alice* test, it is instructive to know what is *not* sufficient. The courts have consistently held that merely reciting a computer implementation of an abstract idea, or limiting use of the abstract idea to a particular technological environment, does not transform an otherwise ineligible claim into a patent-eligible application of an abstract idea.

Elements that *have* been found to provide "significantly more" include elements that tie the abstract idea to an improvement in an existing technology, improvements to the functioning of the computer itself, a specific limitation other than what is well-understood, routine, and conventional in the field, and unconventional steps that confine the invention to a particular useful application for solving a problem that is necessarily rooted in computer technology.

Protecting Business Innovations post Alice

The courts have yet to issue an opinion holding that business methods are categorically ineligible for patent protection. So, it is not yet clear whether *Alice* has resurrected the business method exception. However, it appears that many of the concepts commonly associated with business innovations are now considered to be abstract ideas. Applications with functional descriptions of solutions to business problems that would have been patent-eligible under *State Street* are being routinely rejected as ineligible under *Alice*.

The Federal Circuit has noted that result-focused, functional claim language is a frequent feature of claims held to be ineligible.[7] Thus, if it is difficult to describe an invention except in functional terms having a high level of generality, this may indicate the underlying concept is ineligible. In this case, the best option may be to protect the invention as a trade secret, a copyrighted work, or, in the case of a user interface, using a design patent.

Another question to ask is whether the invention improves the capabilities of the computer (or some other technology), or is merely using the computer as a tool to implement an entrepreneurial concept. An application that identifies an existing technical problem, and explains how embodiments of the invention solve the problem, is likely patent-eligible under *Alice*. In contrast, an invention where the innovative aspects are entrepreneurial in nature is likely ineligible under *Alice*.

When determining how to protect your innovations, consider that the law regarding subject matter eligibility continues to develop. Innovations that do not appear to be patent-eligible today may become eligible based on future court decisions or acts of Congress. To navigate the shifting tides of patent-eligible subject matter, you should work with a firm having broad and up-to-date experience protecting innovative concepts to identify and obtain the best legal protection possible for your intellectual property.

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[1] *Alice Corp. v CLS Bank*, 34 S.Ct. 2347 (2014)
[2] *State Street Bank and Trust Company v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998)
[3] *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008).
[4] *Bilski v. Kappos*, 561 U.S. 593 (2010).
[5] *See Alice* at 2355 (*citing Mayo v. Prometheus*, 132 S.Ct. 1289, 1289 (2012)).
[6] *Id.*
[7] *See Electric Power Group, LLC v. Alstom S.A.*, 830 F3d 1350 (Fed. Cir. 2016).

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