

Essay No. 2 ~ ARE FUNDAMENTAL PRACTICES INELIGIBLE FOR PATENTING? Some thoughts on method inventions implemented on computers.

The computer is a versatile device that can be configured in a limitless variety of ways to perform nearly any task that can be defined in a logical way. It is routinely known – i.e., obvious – that a computer can be programmed to perform a task.

It is not always readily known how best to design the program for a specifically defined solution to solve a particular problem. Thus, invention may be called into play to conceive that solution, such as a program comprising a different and novel sequence of steps, or the use of different steps than thought heretofore to be necessary or effective to accomplish a particular purpose or function.

Decisions in recent case law have singled out method patents that involve programmed computers – especially so-called “business method” patents – for special scrutiny with respect to the eligibility of this kind of subject matter for patenting. These decisions contained some broadly-stated concepts that if misapplied, may categorically deny the eligibility of an invention for patenting. One of these broad concepts is to characterize a business method implemented on a computer as a “fundamental economic practice,” a term not defined by the courts but said to be by its very nature an abstract idea.

Before proceeding, we should ask the question: “What is a *fundamental practice*, in any field of use?” Some possible definitions of fundamental practices include (a) application of laws or theories to concrete problems; or (b) application of rules, regulations, or policies to resolve differences; or (c) application of known techniques or procedures to reach an expected result; or (d) application of common sense or logical reasoning to new questions. All of these share a common element – they are the application of abstract ideas to particular circumstances. Invention is no different – it is the *end result* of applying abstract ideas and imagination to a problem.

As discussed in this article¹, there are several things wrong with characterizing a business method as a “fundamental economic practice.”

Fundamental Economic Practices

The difficulty with characterizing so-called business methods implemented on a computer as little more than abstract ideas is that, on one level, the problem or part of the problem to be solved is an abstract *problem* (e.g., how to analyze, calculate, etc.) that involves the processing of data – information related to some condition or set of circumstances – to arrive at a useful form or application of that data that satisfies a particular purpose. That does not

¹ The sole purpose of this article is to provide general information. It should not be relied on for legal advice. Readers with specific questions should confer with their independent legal counsel.

necessarily mean that the *solution* to that problem is also an abstraction of the kind not within eligible subject matter for a patent under the Patent Statute, 35 U.S.C. §101.

Further, to characterize a business method categorically as an abstract idea is to permit only a superficial view of the subject matter without seeing the underlying innovation that originated the solution embodied in the method. It is a misplaced focus on the type of problem and not the solution to it that required creative insight that leads to this mischaracterization, an error that cuts off prematurely the full consideration of the solution as a potentially patentable one. In other words, the innovation – and a potentially patentable idea – is in the solution, not the type of problem.

For example, one test for whether a business method claim is directed toward an abstract idea is whether it involves a “fundamental economic practice,” of the type discussed in a recent case decided by the U. S. Supreme Court, *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014). This blanket assessment is very broad and often acts to preempt computerized solutions to a problem of processing the complexities of a transaction or making an economic decision using a computer programmed to handle the task. This assessment fails to recognize that substantial analysis and processing of data may be involved, often requiring innovative or creative solutions. Such solutions, may be “necessarily rooted in computer technology” as stated in *DDR Holdings, LLC v. Hotels.com, L. P.*, 773 F.3d 1245 (Fed. Cir. 2014) to efficiently process the transaction or to enable a useful decision that could not otherwise be made, particularly when time is of the essence, often an important element in a transaction.

Fundamental Engineering Practice

In fact, the use of this blanket assessment regarding economic practice is analogous to stating that any fundamental *engineering* practice as embodied in a new and useful process, machine, manufacture, or composition of matter (See 35 U. S. Code §101) is not eligible for patenting. This, despite the well-known fact that countless patented inventions, including products, processes, articles of manufacture, and compositions of matter emerge from innovation within the broad category of fundamental engineering practices.

A computer that is operated by a program that was created to solve a particular problem in a way that did not exist before becomes a special purpose computer or machine that did not previously exist. It is a *new combination* of components that, in *first order* consideration are understood (i.e., it is known what a computer is and what a set of instructions for directing its operation is) but in *deeper* consideration recognizes that the program created is a new thing or mechanism that, when installed on the computer forms a new combination – a new machine – with that computer. The program is an essential component of the machine. Just because it embodies an algorithm should not disqualify the combination that may otherwise be novel and unobvious, from eligible subject matter.

Under the present case law a new combination that is not wholly directed to an abstract idea is eligible for patenting, and thus for examination under the novelty and non-obvious provisions of the patent statute. (See 35 U. S. Code §102 and §103) The required condition for eligibility is that it must include “significantly more” than the abstract idea embodied in it. (See the “*July 2015 Update: Subject Matter Eligibility*” released by the U. S. Patent and Trademark Office) This condition follows from 35 U. S. Code §103, in that “the claim as a whole” must be considered, not just individual elements or steps considered in isolation.

The foregoing paragraphs introduce the concept of what is meant by the phrase “significantly more” that is sought in examining a claim that is believed to be, at least in part, directed to an abstract idea. But, is requiring “significantly more than a patent upon the [ineligible concept] itself” from *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. ___, 132 S. Ct. 1289 (2012) a reasonable test? If not, what is a reasonable test for determining that a claim contains significantly more to qualify as eligible subject matter? Indeed, what is the threshold to qualify as “significantly more?” One answer may lie in what is required to distinguish an invention from the prior art.

An Example of a fundamental Engineering Practice

Returning to the “fundamental engineering practice” concept offers a clue – to apply the Patent Statute in examining the difference between a claimed combination of physical elements and the prior art. Under the statute, the claimed combination must be both (a) novel, and (b) not obvious to a person of ordinary skill in the art. Consider the following example based on an issued patent, U. S. Patent No. 8,303,297, *Apparatus and Method for Controlling Combustion in a Burner*.

Suppose a burner system for heating water relies on a complex algorithm that performs a sequence of calculations responsive to four sensor measurements in order to operate with an optimum air/fuel mixture at any altitude from sea level to 12,000 feet. Suppose further that it is necessary in a certain class of installations that the burner be modified to regulate the air/fuel mixture at a single altitude but maintaining an optimum air/fuel mixture within daily variations in air temperature. It is known to persons skilled in the art that the same computer controlled system as described above could handle this task. However, it is also known that such a system, because of its complexity, is not competitive in price for the particular application when compared to a manual control that is adjusted each day. From such considerations spring the motivation to find another solution or improvement of an existing process to solve the stated problem.

Different designs, all aimed at providing the same degree of control provided by the four-sensor system at reduced cost were tried and found inadequate at some altitude or with the formulation of some available fuels. Continued investigation revealed that monitoring only a single sensed parameter with a simpler computer program, modified to provide the necessary

regulation based on the single parameter and a reference, can provide the needed control at a lower cost per unit than the manual controls. The solution is not obvious because it was believed by persons of ordinary skill in the art that all four of the parameters must be measured and input to a complex algorithm to provide the range of control needed to regulate air/fuel mixture.

Thus, finding that only one among a group of parameters is sufficient for enabling computer control of a particular system for a specific purpose exceeded the threshold of “significantly more,” even though it was a simpler system than the prior art. This is an invention that resulted from a creative, counterintuitive insight to provide a novel and non-obvious solution. This solution, certainly useful, therefore satisfies the “useful process” category of 35 U.S. Code §101. This burner control example is similar to the patent eligible invention described in U. S. Patent Application Serial No. 602,463 that was at issue in the Supreme Court case *Diamond v. Diehr*, 450 U.S. 175 (1981).

Conclusion

Although the burner control method described above is an example of application of a “fundamental engineering practice,” that characterization has nothing to do with its patent eligibility as an invention. Similarly, passing off a method as an application of a “fundamental economic practice” may be seen as having nothing to do *per se* with the patent eligibility of an invention for such a method. Does this mean that a reasonable case can be made that such a policy has everything to do with preempting as many applications for patent of a method involving a computer as possible? Perhaps. However, this area of the patent case law is evolving steadily. Decisions expected in the next few years may yield some satisfactory answers to both applicants and examiners. These are subjects for a further Note on the scope of eligibility analysis under 35 U.S. Code §101.

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