

Comment on Proposed Rulemaking: Definition of Technological Invention

Summary: The PTO's proposed definition is circular and does not meet the requirements set forth in the AIA. Common usage provides a wide range of meanings for "technological" and related words. Case law in the United States and Europe has not provided a succinct, universally applicable definition. One method that can yield a useful definition is to consider what inventions are clearly *not* "technological," *i.e.*, those that would not be patentable under either the "machine-or-transformation" test of *Bilski* or the "useful, concrete, and tangible result" test of *State Street*.

We, the undersigned patent practitioners from the law firm of Fenwick & West LLP, suggest that the Office's proposed definition of "technological invention," which uses the word "technical" twice and "technological" once, provides neither the Board nor the public with sufficient guidance as to which patents are likely to be considered a "covered business method patent" (CBMP). We suggest an alternative definition in accord with the legislative history, judicial precedent, and the requirement that the PTO "consider the effect of the rules on the economy, the integrity of the patent system, the efficient administration of the Office, and the ability of the Office to complete timely the instituted proceedings." (Notice of Proposed Rulemaking at 35, citing 35 U.S.C. 326(b)).

I. The Office's proposed definition fails to meet the requirements of 35 U.S.C 326(b)

The definition proposed by the Office is not in accord with the legislative history because, while it mirrors comments made in the legislative history about the concept of "technological invention" it does not actually provide a *definition* of "technological invention." By simply restating the words "technology" and "technological," the Office's proposed definition does not meet the above-stated requirements from 35 U.S.C. 326(b). The economy suffers because the definition fails to provide guidance as to which patents are likely to be subject to the CBMP review proceedings. The integrity of the patent system suffers because a circular definition allows the Board to proceed on an *ad hoc* basis without the further guidance Congress called for in requiring the Office to provide a definition. The efficient administration of the Office, and the ability of the Office to complete timely the proceedings, suffer because the lack of guidance will almost certainly lead to parties submitting patents for review that would not, were a proper definition provided, be found to be CBMPs.

II. Definitions provided by common usage and case law are insufficient as well

Common usage of the term "technological" (and related terms) provided by dictionaries evidences a wide range of meanings and does not lead to a single definition that is of practical use. Examples illustrating these varied uses are collected at the conclusion of our comments. Further illustrating the difficulty of a concise definition are common terms including the word "technology" or its derivatives. For instance, "Information Technology" has a large number of common definitions that span a broad range of activities. For illustrative purposes we also collect a sampling of definitions of "Information Technology" at the conclusion of our comments.

Such definitions are highly varied. For instance, some of the definitions of technology do not suggest the need for physical components. See, *e.g.*, the YourDictionary definition, which states, “Technology is, simply, the application of knowledge to solve problems or invent useful tools.” See <http://reference.yourdictionary.com/word-definitions/definition-of-technology.html>.

One can only assume that the Congressional sources quoted by the Office as examples of the legislative history did not have more in mind than common usage when they themselves used the terms “technical” or “technology.” While it might be tempting simply to select one of the definitions below, we find insufficient similarity in the definitions below, or in their common usage, to support an argument that any one of them (or any particular combination of them) should be favored over others.

Another relevant source for a definition of a technological invention may come from the various patent jurisdictions that rely on such a definition for their own determinations of patentability. For example, the European Patent Office, in a seminal decision from 1998, held that, “a computer program product is not excluded from patentability under Article 52(2) and (3) EPC if, when it is run on a computer, it produces a further technical effect which goes beyond the ‘normal’ physical interactions between program (software) and computer (hardware).” See T 1173/97 (Computer program product/IBM), headnote, available at <http://www.epo.org/law-practice/case-law-appeals/recent/t971173ex1.html>. As further explained in that decision, “The technical character of an invention might result from its field of application, but might equally well result from using information technology to solve a problem in a non-technical field.” *Id.* at 8. Unfortunately, the European Patent Convention and the decisions of the various jurisdictions applying it do not provide any succinct and universal definition of what might give an invention a “technical character,” so again we are left with resort to the common understanding of such terms.

Our own case law is similarly bereft of a generalized definition that is usable in this instance. For example, in the *Bilski* case, amicus IBM focused on whether an invention was “technological” as the touchstone of patentability, and stated, “The technological contribution standard is a constitutional one....” Brief for International Business Machines Corporation as Amicus Curiae Supporting Neither Party, *Bilski v. Kappos* (No. 08-964) at n.8 (available at <http://www.bilskiblog.com/blog/amicus-briefs.html>). However, nowhere in the 38 judicial decisions, the various legislative materials and the approximately three dozen other cited authorities discussed therein was there a singular definition of what a “technological contribution” is.

III. A usable definition can be derived from U.S. law by synthesizing an exclusionary test

The paucity of any universal definition from such a wide range of sources, and indeed the Office’s own proposal for use of a circular definition, lead to the conclusion that defining “technological” is an elusive task. We suggest that for purposes of efficient application, the Office should consider a definition of “technological invention” that is based on exclusion, *i.e.*, what is clearly *not* a technological invention. Here, a reasonable framework is provided by prior case law. Specifically, in the past decade and a half the Federal Circuit has applied two tests that relate to patentability, both of which also relate to the issue of whether an invention has a technical character. The first comes from the *State Street* case, and asserts that patentability

extends to “anything which produces a useful, concrete, and tangible result.” *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 1373-1374 (Fed. Cir. 1998). The second is the machine-or-transformation test proposed by the Federal Circuit in *Bilski* and upheld by the Supreme Court as a useful, if not exclusive, test. It stands to reason that if none of the claims of a patent are drawn to subject matter that would satisfy either test, such patent would not be for a “technological invention.”

Neither of these tests, would, by themselves, perfectly circumscribe “technical” inventions, as the Supreme Court has held. However, combining the two tests and saying that an invention is not likely technological if it fails both of these tests is in accord with case law. What this definition might lack in precision it makes up for in ease of application, as there is a great deal of case law already applying these tests. Thus, we propose the following definition:

A “technological invention” is any invention other than one that:

- Does not produce a useful, concrete and tangible result; AND
- Is not tied to a particular machine or apparatus; AND
- Does not transform a particular article into a different state or thing.

Undoubtedly, careful scrutiny of this approach will yield some examples where this definition might include certain inventions that most people would not consider technological and might exclude some inventions that most people would consider technological. Such an outcome is expected, particularly because the two tests that are combined above were not focused explicitly on the issue at hand now, *i.e.*, whether an invention is technological. However, comparing the negative application of these tests with common definitions of “technological” and related terms, and reviewing the case law and legislative history for alternatives, such an approach appears to be a reasonable one for the practical purpose of determining which patents are to be eligible for the transitional review procedure.

These comments are provided solely as the personal opinions of the undersigned, and do not necessarily reflect the position of Fenwick & West LLP or any of its clients.

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Appendix

Sample Definitions

Technical

1. a. the practical application of knowledge especially in a particular area
b. a capability given by the practical application of knowledge
<http://www.merriam-webster.com/dictionary/technology>
2. a. belonging or pertaining to an art, science, or the like
b. peculiar to or characteristic of a particular art, science, profession, trade, etc
<http://dictionary.reference.com/browse/technical>

Technology

3. The purposeful application of [information](#) in the [design](#), [production](#), and [utilization](#) of [goods and services](#), and in the [organization](#) of human [activities](#).
<http://www.businessdictionary.com/definition/technology.html#ixzz1quIddJA1>
4. a. The application of science, especially to industrial or commercial objectives.
b. The scientific method and material used to achieve a commercial or industrial objective.
<http://www.thefreedictionary.com/technology>
5. The sum total of knowledge and information that society has acquired concerning the use of resources to produce goods and services. This technology often takes the form of scientific knowledge (the best combination of chemicals to make a long-lasting floor wax), but can also be plain old common sense (irrigate during a drought, not during a flood). Whether scientific or not, technology affects the technical efficiency with which resources are combined in production.
<http://glossary.eonguru.com/economic-term/technology>
6. a. The application of science, especially to industrial or commercial objectives.
b. The scientific method and material used to achieve a commercial or industrial objective.
<http://www.answers.com/topic/technology#ixzz1quJOHfc8>
7. Technology can be most broadly defined as the entities, both material and immaterial, created by the application of mental and physical effort in order to achieve some value. In this usage, technology refers to tools and machines that may be used to solve real-world problems.
http://en.wikipedia.org/wiki/Technology#Definition_and_usage
8. The application of science or knowledge to commerce and industry.
<http://reference.yourdictionary.com/word-definitions/definition-of-technology.html>
9. Throughout the twentieth century the uses of the term have increased to the point where it now encompasses a number of “classes” of technology:

1. Technology as Objects:

Tools, machines, instruments, weapons, appliances - the physical devices of technical performance

2. Technology as Knowledge:

The know-how behind technological innovation

3. Technology as Activities:

What people do - their skills, methods, procedures, routines

4. Technology as a Process:

Begins with a need and ends with a solution

5. Technology as a Sociotechnical System:

The manufacture and use of objects involving people and other objects in combination

<http://atschool.eduweb.co.uk/trinity/watistec.html>

10. Technology is a body of knowledge used to create tools, develop skills, and extract or collect materials. It is also the application of science (the combination of the scientific method and material) to meet an objective or solve a problem. Scale is a way to represent the relationship between the actual size of an object and how that size is characterized, either numerically or visually.

<http://science.education.nih.gov/supplements/nih4/technology/guide/lesson1.htm>

11. Technology is a broad term that refers both to artifacts created by humans, such as machines, and the methods used to create those artifacts. More broadly, technology can be used to refer to a way of doing something or a means of organization: for instance, democracy might be considered a social technology.

<http://www.wisegeek.com/what-is-technology.htm>

Information Technology

1. The development, installation, and implementation of computer systems and applications.

<http://www.thefreedictionary.com/information+technology>

2. The technology involving the development, maintenance, and use of computer systems, software, and networks for the processing and distribution of data

<http://www.merriam-webster.com/dictionary/information%20technology>

3. It refers to anything related to computing technology, such as networking, hardware, software, the Internet, or the people that work with these technologies.

<http://www.techterms.com/definition/it>

4. We use the term information technology or IT to refer to an entire industry. In actuality, information technology is the use of computers and software to manage information.

<http://jobsearchtech.about.com/od/careersintechnology/p/ITDefinition.htm>

5. Information Technology (IT) is concerned with technology to treat information. The acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a microelectronics-based combination of computing and telecommunications are its main fields

http://en.wikipedia.org/wiki/Information_technology

6. The development, implementation, and maintenance of computer hardware and software systems to organize and communicate information electronically.

<http://dictionary.reference.com/browse/information+technology>

7. IT (information technology) is a term that encompasses all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations, and other forms, including those not yet conceived).

<http://searchdatacenter.techtarget.com/definition/IT>

8. The study or use of computers and electronic systems for storing and using information. Information technology is often simply called IT.

<http://www.macmillandictionary.com/dictionary/american/information-technology>

9. Information Technology means the use of hardware, software, services, and supporting infrastructure to manage and deliver information using voice, data, and video.

<http://www.nd.gov/itd/about-us/definition-information-technology>

10. Set of tools, processes, and methodologies (such as coding/programming, data communications, data conversion, storage and retrieval, systems analysis and design, systems control) and associated equipment employed to collect, process, and present information. In broad terms, IT also includes office automation, multimedia, and telecommunications.

<http://www.businessdictionary.com/definition/information-technology-IT.html>

11. Information Technology, or IT, is the study, design, creation, utilization, support, and management of computer-based information systems, especially software applications and computer hardware.

<http://informationtechnology.net/>

12. The technology used for the study, understanding, planning, design, construction, testing, distribution, support and operations of software, computers and computer related systems that exist for the purpose of Data, Information and Knowledge processing.

http://wiki.answers.com/Q/What_is_information_technology

13. The study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware. IT deals with the

use of electronic computers and computer software to convert, store, protect, process, transmit, and securely retrieve information.

http://wiki.answers.com/Q/What_is_information_technology

14. Information technology is related to the use of computers and software to manage information. It is used for the study, understanding, planning of software. The construction, testing, distribution, support and operations of software are also included in information technology. It is used for management of computer based information systems (mainly computer hardware and software applications). This all is done with the main purpose of Data processing or Information processing or knowledge processing.

<http://www.trivology.com/articles/383/what-is-information-technology.html>