From: Brian Hickman
Sent: Friday, May 19, 2006 6:38 PM
To: AB98 Comments
Subject: Comments on Interim Guidelines

Dear Commissioner,

Attached please find a Word document containing my comments regarding the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility.

Please give them serious consideration.

Regards,
Brian Hickman

Reg. No. 35,894

COMMENTS ON THE INTERIM GUIDELINES

by Brian Hickman[1]

INTRODUCTION

On November 22, 2005, the United States Patent and Trademark Office published Interim Guidelines ("the Guidelines"). The stated purpose of the Guidelines is to "assist USPTO personnel in the examination of patent applications to determine whether the subject matter as claimed is eligible for patent protection".

It is respectfully submitted that the Guidelines need a major overhaul. In particular, they neither provide clear guidance, nor produce consistency. Moreover, they do not accurately reflect the reasoning of the cases on which they claim to be based. Hereafter, I will provide evidence of confusion produced by the Guidelines, identify the source of the confusion within the Guidelines, and suggest a solution to reduce the confusion. Finally, I will provide answers to the specific questions posed by the USPTO.

EVIDENCE OF CONFUSION

The Guidelines are supposed to "merely revise USPTO examination practice for consistency with the USPTO's current understanding of the case law regarding subject matter eligibility under 35 U.S.C. 101."[2]

However, since publication of the Guidelines, the only thing that has been consistent is the flood of 101 rejections that has been pouring out of the examination corps.

The following excerpts are examples of the many creative interpretations of 35 U.S.C. 101 the Guidelines have inspired:

> "The language of the claims raise a question as to whether the claims are directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. **This rejection can be overcome by simply stating that the method is being performed in a computer**: example 'A computer-implemented method for …'"[3]
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> In rejecting **a system claim**, an Examiner stated: "The result of independent claim 38 is a determination, which is **nothing more than a thought or computation within a**

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[1] Reg. No. 35,894. The opinions expressed herein are solely those of the author. They do not necessarily represent the views of the author's firm, nor any of its clients.
[2] Fed. Reg. Vol. 70, No. 243, pg. 75452.
[3] This statement implies that a result magically becomes useful, concrete and tangible when it is produced by a computer process. Presumably the same result would not be useful, concrete or tangible if produced by a process that does not involve a computer.

processor…. Applicant's specification implies that this 'system' can be software, thus, lacking hardware necessary to realize the claimed 'determination'."[4]

"The claims are directed to a non-statutory subject matter, specifically, the claims are not directed towards **the final result** that is useful, tangible and concrete."[5]

"Claims 1 and 27 … do not state any useful utility …. A statement of the utility to this proposed invention is found on pages 1-2, paragraph 0003. Incorporation of information contained in that paragraph would provide a useful utility and overcome this 35 U.S.C. 101 claim rejection."[6]

In rejecting a computer-readable medium claim, an Examiner stated: "These are not patentable, by statute, as these are **not tangible**".

"Claims 1 and 27 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial **asserted** utility or a **well established** utility."[7]

From these and other Official Actions, it appears that examiners perceive the Guidelines as a mandate to give more subject matter rejections. However, there appears to be little coherence or uniformity in their analysis and conclusions.

REQUIREMENT PROLIFERATION

The examination corps is interpreting the Guidelines as establishing a plethora of **mutually distinct** subject matter eligibility requirements. This is not surprising, because the Guidelines contain ample support for such interpretations. For example, in its current form, the Guidelines contain express or implicit support for 101 rejections based on any of the following:

- the invention recited in the claim does not fall into any of the four statutory categories
- the invention recited in the claim does not satisfy the utility requirement of section 101
- the invention recited in the claim does not have a specific utility
- the invention recited in the claim does not have a substantial utility
- the invention recited in the claim does not have a credible utility
- the invention recited in the claim is no more than an abstract idea
- the invention recited in the claim is no more than a law of nature

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[4] This statement is illogical for a variety of reasons. First, a system claim does not produce a "result". Second, "nothing more than a computation within a processor" can be said for virtually all computer-related inventions. The notion that computer computations are not eligible for patent protection blatantly contradicts the position of the 2/13/06 Office Action that implied that acts are not patentable ***unless*** performed by a processor.

[5] This statement implies that only "final" results are useful, concrete and tangible. However, it is unclear what it means for results to be "final". Virtually every process can be characterized as an intermediary step in a larger process. (e.g. Making rubber is preliminary to making a tire. Making a tire is preliminary to making a car.)

[6] The Examiner seems to acknowledge that the claimed invention is useful, but rejects the claims because one has to revert to the specification to understand why the invention is useful.

[7] This statement implies that it is not sufficient for the utility of a claimed invention to be plainly evident from the specification. Rather, the utility must either "asserted" or "well established".

- the invention recited in the claim is no more than a natural phenomenon
- the invention recited in the claim is no more than a mathematical algorithm
- the invention recited in the claim is a signal
- the result produced by the claimed invention is not useful
- the result produced by the claimed invention is not tangible
- the result produced by the claimed invention is abstract
- the result produced by the claimed invention is not concrete
- the result produced by the claimed invention is not substantially repeatable
- the result produced by the claimed invention is not "real-world"
- the result produced by the claimed invention is not a practical application of an abstract idea, law of nature, or natural phenomenon
- patenting the claimed invention would preempt an abstract idea, law of nature, or natural phenomenon
- the claim does not specifically recite a practical application of the claimed invention

This list of "Guideline-supported eligibility requirements" is merely illustrative. I'm sure that creative examiners could find several more.

As if the Guideline-supported eligibility requirements were insufficient, examiners are taking license to make their own variations on the Guideline's themes. For example, in the Office Action excerpts quoted above, claims are rejected based on:

- the claim is not directed to the "final result" described in the specification,[8]
- the result produced by the claimed invention is "nothing more than a … computation within a processor",[9]
- some embodiments of the claimed invention are not tangible.[10]

When in doubt about which of the requirements to focus on, examiners combine the requirements, making it unclear which of the requirements are being used as the basis for rejection, as is illustrated in the following skillfully-crafted excerpt:

> The language of the claims raise a question as to whether the claims are directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, tangible result to form the basis of statutory subject matter under 35 U.S.C. 101[11]

This "requirement proliferation" inevitably leads to inconsistency and confusion. Because examiners are acting under the presumption that failure to satisfy any one of these requirements

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[8] This appears to be a variation on the "useful result" requirement.
[9] This appears to be a creative synthesis of "the invention recited in the claim is no more than a mathematical algorithm" and "the result produced by the claimed invention is abstract".
[10] This appears to be a variation on the "tangible result" requirement.
[11] This excerpt is interesting in that it does not actually assert that the claims are directed to merely an abstract idea, but simply that they "raise a question". Also notable is the implicit homage to the now defunct "technological art" requirement.

provides sufficient grounds for a 101 rejection, no regard is given to the logical relationships between the requirements, nor their original case-law context.

Given so many new ways to reject claims under 101, and how much easier it is to support 101 rejections than prior art rejections, it is no wonder that applicants are now swimming in a sea of 101 rejections.

LOGICAL RELATIONSHIPS BETWEEN THE ELIGIBILITY REQUIREMENTS

It does not take much legal analysis to realize that there are important logical relationships between the various Guidelines-supported eligibility requirements. For example, many of these "requirements" were originally nothing more than attempts to clarify the meaning of other requirements. For example, the "substantially repeatable result" requirement stems from a USPTO attempt to clarify of the "concrete result" requirement. The "concrete result" requirement stems from a judicial pronouncement of a "useful, tangible and concrete result" consideration. The "useful, tangible and concrete result" consideration was originally given as an example of how a claim could be shown to satisfy the "practical application" requirement. The "practical application" requirement was initially intended to help distinguish patentable eligible subject matter from "abstract ideas, laws of nature and natural phenomenon". Finally, the "abstract ideas, laws of nature and natural phenomenon" categories were created to explain what types of things do not fall into any of the four statutory categories of section 101.

Failure to recognize the logical relationships between the eligibility requirements results in wasteful analysis. For example, if a claimed invention falls into one of the statutory categories, then the subject matter of the claim cannot possibly be "nothing more than an abstract idea, a law of nature or a natural phenomenon." Therefore, testing for "excluded category matter" after determining that a claimed invention falls into one of the four statutory categories is a waste of time.

Failure to recognize the logical relationships between the eligibility requirements encourages examiners to assume logically untenable positions. For example, examiners may conclude that a claimed invention both falls into a statutory category and is nothing more than an abstract idea. As another example, Examiners may conclude that a claimed invention both has a practical application and does not achieve a tangible result.

Failure to recognize the logical relationships between the eligibility requirements encourages examiners to pick and choose the requirements that best support their position. As a result, an examiner may, for example, focus exclusively on whether a claim recites a practical application without even considering whether the claimed invention satisfies the utility requirement.

LEGAL ELIGIBILITY REQUIREMENTS AND ANCILLARY CONSIDERATIONS

Because the Guidelines fail to reflect the logical relationships between the eligibility requirements, they do not clearly distinguish between what Section 101 legally requires ("legal eligibility requirements") and what types of things to can be considered when deciding whether the legal eligibility requirements are satisfied ("ancillary considerations").

A thorough review of the case law reveals that there are, in fact, only two legal eligibility requirements:

(1) the claimed invention must fall into one of the four statutory categories, and
(2) the claimed invention must satisfy the utility requirement of section 101

The rest of the so-called requirements are not requirements at all, but merely ancillary considerations which may or may not be relevant to any particular eligibility determination.

For the sake of brevity, a thorough analysis of the case law is not provided herein. However, the Guidelines themselves recite the clearest judicial pronouncement on the subject:

> The plain and unambiguous meaning of section 101 is that **any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be patented** if it meets the requirements for patentability set forth in Title 35, such as those found in sections 102, 103, and 112.
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> The use of the expansive term "any" in section 101 represents Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in section 101 and the other parts of Title 35.... Thus**, it is improper to read into section 101 limitations as to the subject matter that may be patented where the legislative history does not indicate that Congress clearly intended such limitations**.[12]

While things such as "practical application" and "useful, tangible, concrete result" were never intended to be separate Section 101 requirements, such ancillary considerations do have a place in the patent eligibility analysis.

For example, the ancillary considerations may be used by examiners to show that one of the two legal eligibility requirements is not satisfied. Thus, if a claim is directed to nothing more than an abstract idea, then the examiner can point to the case law that holds that an abstract idea does not fall into any of the four statutory categories.

In addition, the ancillary considerations may be used by applicants show that the two legal eligibility requirements are satisfied. For example, to rebut an assertion that a claimed invention does not satisfy the utility requirement, an applicant can identify a practical application for the invention, or point to a useful, tangible and concrete result produced by the claimed invention.

The Guidelines should be rewritten to make it clear that the two legal eligibility requirements set forth above are the only requirements of Section 101. The ancillary concepts of "practical

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[12] Allapat, 31 USPQ2d at 1556. In what can only be regarded as an utter disregard for consistency, the Guidelines quote this passage and then proceed to establish a hoard of "improper" 101 requirements based on what the USPTO has interpreted as "judicial exceptions to 101".

application", "useful, tangible and concrete results", etc. should be presented as potentially helpful points of discussion within the context of those two legal requirements. Until the current Guidelines are revised accordingly, there is no reason to expect a decline in the present tide of confusion.

ANSWERS TO QUESTIONS POSED BY THE USPTO

> (1) While the Patent Subject Matter Eligibility Interim Guidelines explain that physical transformation of an article or physical object to[13] a different state or thing to another establishes that a claimed invention is eligible for patent protection, Annex III to the Patent Subject Matter Eligibility Interim Guidelines explains that identifying that a claim transforms data from one value to another is not by itself sufficient for establishing that the claim is eligible for patent protection. Therefore, claims that perform data transformation must still be examined for whether there is a practical application of an abstract idea that produces a useful, concrete, and tangible result. Is the distinction between physical transformation and data transformation appropriate in the context of the Patent Subject Matter Eligibility Interim Guidelines? If not, please explain why and provide support for an alternative analysis.

No. The physical transformation of an article or physical object from a different state or thing to another should not establish that a claimed invention is eligible for patent protection. Such a physical transformation would establish that the claimed invention is not an "abstract idea", but it does not necessarily indicate that the claimed invention satisfies the utility requirement.

The instruction that "claims that perform data transformation must still be examined for whether there is a practical application of an abstract idea that produces a useful, concrete, and tangible result" should be changed to "claims that perform data transformation must still be examined to determine whether they satisfy the utility requirement of Section 101."

Note: in all cases "practical application of an abstract idea" should be replaced with "practical application". There is no requirement that the idea behind an invention be "abstract". In fact, there is no requirement that there be an idea behind an invention (an invention may be a "discovery").

> (2) Is the USPTO interpretation of State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F. 3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998), as holding that if there is no physical transformation, a claimed invention must necessarily, either expressly or inherently, produce a useful, concrete, and tangible result (rather than just be "capable of" producing such a result) either too broad or too narrow? If so, please suggest an alternative interpretation and reasons therefor.

The interpretation is too narrow. State Street did not intend to establish legal eligibility requirements beyond the two identified above. The "useful, concrete, and tangible result"

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[13] This is probably supposed to be "from".

discussion was in the context of determining whether the invention in State Street satisfied the two legal eligibility requirements. Thus, State Street stands for the proposition that one possible way of showing that the two legal eligibility requirements are satisfied is by a showing that the claimed invention is produces a useful, concrete and tangible result.

Note: the legal eligibility requirements have never required that the “result” of a process, machine, manufacture or composition of matter be expressly recited in the claim.

> (3) As the courts have yet to define the terms "useful," "concrete," and "tangible" in the context of the practical application requirement, are the explanations provided in the Patent Subject Matter Eligibility Interim Guidelines sufficient? If not, please suggest alternative explanations.

“Useful”, “concrete” and “tangible” were not intended to be separate tests. They were used to convey the single idea that the “result” should be one that is meaningful in the real-world.

> (4) What role should preemption have in the determination of whether a claimed invention is directed to a practical application of a 35 U.S.C. 101 judicial exception?

An eligibility requirement is not very useful if it is always satisfied. Consequently, the non-preemption requirement is not very useful. The uselessness of the non-preemption requirement is exemplified by the fact that it is virtually impossible to provide examples of inventions that would (1) satisfy the two legal eligibility requirements, (2) be novel and nonobvious, and (3) preempt an abstract idea, law of nature or natural phenomenon.

The best attempt so far was by the court in Allapat, which mentioned a hypothetical claim to Einstein’s formula. However a claim to Einstein’s formula would not fall into any of the four statutory categories anyway, and would not be novel if it did (in use by others for more than a year). In contrast, the preemption examples given in the Guidelines don’t actually work (a computer readable medium storing a formula would not preempt most practical uses of the law of nature represented in the formula).

Since the preemption doctrine has been mentioned in some cases, it would probably be irresponsible to leave it out completely. However, it is more a theoretical requirement than anything, and may not merit more than a paragraph, or a footnote.

“Preemption” and “practical application” are only logically related in that preemption can only occur if a claim covers all possible practical applications of an abstract idea, law of nature, or natural phenomenon. Therefore, if an applicant receives a “preemption” rejection, the applicant should be able to overcome the rejection by showing that there is at least one practical application, of the abstract idea identified in the rejection, that is not covered by the claim.

From the perspective of preemption, the issue is not whether the claimed invention is directed to a practical application, the issue is whether the claimed invention covers all possible practical

applications. If a claimed invention has no practical application at all, then the utility requirement may be a problem, but preemption shouldn't be.

> (5) Annex IV to the Patent Subject Matter Eligibility Interim Guidelines explains why the USPTO considers claims to signals per se, whether functional descriptive material or non-functional descriptive material, to be nonstatutory subject matter. Does the USPTO analysis represent a reasonable extrapolation of relevant case law?

No.

> If not, please explain why and provide support for an alternative analysis.

The Guidelines fail to two distinguish between physical media signals and energy media signals.

Physical media signals are produced by giving new properties (magnetic, electric, photonic properties) to material (e.g. a copper wire or optic fiber). A claim to a physical media signal would go something like: "A signal propagated on a physical medium, the signal encoding instructions which, when executed by a processor, cause the processor to…"

Energy media signals are produced by giving new properties (pulses, frequency modulations, phase shifts, etc.) to energy (light, sonic waves, etc.). A claim to an energy media signal would go something like: "An energy signal encoding instructions which, when executed by a processor, cause the processor to…"

A claim simply to "a signal carrying encoded instructions" would cover both physical media signals and energy media signals.

If the USPTO is going to rely exclusively on the Diamond v. Chakrabarty definition of "manufacture", the physical media/energy media distinction is critical, since physical media signals literally satisfy the Chakrabarty definition, while energy media signals do not.

However, as is acknowledged in the Guidelines themselves, the Chakrabarty definition of manufacture is just one of many formulations that have been used by the courts. There is no single legally-mandated definition of manufacture because it is impossible to predict the nature of all future human creations. If the courts were to attempt a comprehensive definition of manufacture, it would probably be something like: "Any thing produced as a result of human ingenuity."

Such a definition would cover all forms of artificially-generated signals, and therefore render unnecessary the physical media/energy media distinction. There are many reasons for adopting such a definition, a few of which are:

- There is no scientific justification for distinguishing between physical media and energy media. For at least half a century, it has been know that matter and energy are two forms of the same thing.

- There is no practical justification for distinguishing between physical media and energy media. The two are used interchangeably. For example, my home network includes a computer connected to the network by a cat 5 cable, another computer connected to the network by an over-the-phone-line network connection, and a laptop connected to the network through a wireless gateway.
- Excluding energy media signals from patent protection would allow parties to escape direct infringement simply by changing the manner in which they deliver software to end users. For example, a party that sends software into the United States over a physical line could directly infringe a claim, but avoid infringement of the same claim by sending the same software to the same recipients over a satellite connection.
- A policy that excludes from protection any claim that covers energy media signals would constitute a policy reversal. For years, people have relied on the USPTO's prior position that signals (e.g. carrier waves) were patentable. Reversing that position at this point is irresponsible, and has the effect of retroactively invalidating thousands of issued claims.

If claims directed to a signal per se are determined to be statutory subject matter, what is the potential impact on internet service providers, satellites, wireless fidelity (WiFi [reg]), and other carriers of signals?

The party that produces a signal that is covered by a claim (e.g. by uploading/emailing software) should be treated as the party the "makes" the signal for the purpose of infringement. Even when that party originates the signal from outside the U.S., the signal is "made" by that party in the U.S. when the signal propagates across the U.S. border.

The party that executes the instructions that are encoded in the signal should be treated as the party that "uses" the signal for the purpose of infringement.

The party that merely controls the mechanism for propagating the signal should not be implicated in any infringement. Consequently, internet service providers, satellites, wireless fidelity and other carriers of signals should not be implicated when the communication facilities they provide to other parties are used by those other parties to make or use infringing signal.