

August 19, 2018

The Honorable Andrei Iancu
Under Secretary of Commerce for Intellectual Property and Director
of the United States Patent and Trademark Office
600 Dulany Street
Alexandria, Virginia 22314

Via Electronic Mail to: Eligibility2018@uspto.gov

Re: Determining Whether a Claim Element Is Well-Understood, Routine, Conventional for Purposes of Subject Matter Eligibility

Dear Under Secretary Iancu,

The following is responsive to the *Request for Comments on Determining Whether a Claim Is Well-Understood, Routine, Conventional for Purposes of Subject Matter Eligibility* (83 Federal Register 17536, April 20, 2018).

I write on behalf of Digimarc Corporation. Digimarc is a publicly traded company with 200 employees, whose business primarily concerns image and audio processing technology.

Our innovations have led to over 1000 U.S. patents in the past 20 years. Digimarc's work in signal processing finds applications as diverse as authenticating drivers' licenses, hiding redundant digital data signals across supermarket packaging to improve the speed and reliability of item identification (imperceptible barcodes across an entire package), detecting nascent cancers, and deterring the counterfeiting of banknotes.

Digimarc's patent applications sometimes receive § 101 rejections that suffer from lack of standards. Uncertainty about the metes/bounds applied by the Patent Office in judging subject matter eligibility can also lead to uncertainty about the validity of issued patents. Responding to such circumstances necessarily drives up legal costs and may leave valuable inventions without patent protection. Without the potential of patent protection, Digimarc may be less likely to invest in certain promising needs of the marketplace. We thus commend the Office's continuing *efforts to develop guidelines concerning application of § 101*.

We particularly commend development of guidelines regarding Step 2B of the *Mayo/Alice* test (whether the claim recites elements sufficient to ensure that the patent amounts to "significantly more" than a patent on the abstract idea). Our patent applications frequently have been rejected on § 101 grounds, with the "significantly more" inquiry dismissed with boilerplate or conclusory recitations.

These boilerplate rejections necessitate additional actions and interviews to first clarify the basis of the rejection and then dispose of it. This takes time and money – drawing resources away from more productive endeavors. Digimarc has also experienced inconsistent handling of this issue among art units. In some cases, we have been forced to abandon applications, as the cost, delay and uncertainty of further prosecution becomes prohibitive. In the aggregate, rejections like these serve as a drag on the economy. The Office is right to fix this problem.

Digimarc agrees with the recommendations of the AIPLA that the USPTO must give the applicant an opportunity to respond to the USPTO’s evidence under its *Berkheimer* guidance. The Office should further clarify that the basis for 2B analysis must be provided in a non-final Office action.¹

The Office’s April 2018, training presentation, *Subject Matter Eligibility: Well-Understood, Routine, Conventional Activity*,² is a good start for Examiner guidance. We propose four further issues for consideration:

- The Office should provide additional guidance in formulating an “abstract idea,” else the well-understood/routine/conventional test may have nothing left to analyze
- Dependent claims are more likely patent-eligible than independent claims, and deserve at least commensurate consideration
- Examiners should be instructed that substantial evidence supporting the well-understood, routine, or conventional standard is required by the Administrative Procedure Act
- “Inventive concept” should be consigned to the “dustbin of history;” the well-understood/routine/conventional test should not be confused with novelty and non-obviousness

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Step 2B considers whether a claim recites “significantly more” than the abstract idea. That is, beyond the “abstract idea” of the claim, what is there, and is it significant?

In Digimarc’s patent prosecution, we have found that Examiners sometimes essentially moot Step 2B by embracing so much of the claim in their characterization of the alleged abstract idea (Step 2A) that there is little, or nothing left. There is little or no “more” to be examined for significance.

Examples illustrate the point. Here are three different examiners’ “abstract idea” characterizations, quoted from Office Actions received by Digimarc:

- “Claim(s) 1-18 are directed towards the abstract idea such as message key generation steps by transforming multi-bit seed with randomizing process and further transforming

¹ See: AIPLA Comments on Determining Whether a Claim Element Is Well-Understood, Routine, Conventional for Purposes of Subject Matter Eligibility [Docket No.: PTO–P–2018–0033], August 13, 2018.

² Berkheimer-training-20180427.pptx, available for download from <https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility>.

with convolutional encoding and using the generated message key transforming plurality-bit message according to set of steps or mathematical procedures.”³

- “The limitations that set forth the abstract idea are: sensing first information, including ambient audio information about a user's physical - as opposed to computational - environment; transmitting the sensed information, or data derived therefrom, to a remote service, and also transmitting identifier data associated with the user in connection with a subsequent transaction, transmitting said identifier data associated with the user and as part of said subsequent transaction, receiving information for rendering by the user's computing apparatus wherein the information received for rendering is customized based on the information sensed about the user's earlier physical environment; wherein the subsequent transaction occurs more than an hour after said sensing of the first information.”⁴
- “The claims appear to be directed to ‘A watermark embedding process may convert a message, signal or payload into a watermark signal. The embedding process may then combine the watermark signal with media content and possibly another signals (e.g., an orientation pattern or synchronization signal) to create watermarked media content. The process of combining the watermark signal with the media content may be a linear or nonlinear function. The watermark signal may be applied by modulating or altering signal samples in a spatial, temporal or some other transform domain.’”⁵

With such detailed arrangements all subsumed into “abstract ideas,” all that’s left for the “significantly more” test often is a claim’s recitation of ancillary elements, such as a processor and memory.

More straightforwardly, consider the familiar *Bascom* case. Should an Examiner characterize the abstract idea in that case as:

- “employing a user-configurable Internet filtering tool, at a location remote from the user, to filter content;” or
- “filtering Internet content”?

Adoption of the former “abstract idea” subsumes subject matter that the Federal Circuit found to be “significantly more” in its Step 2B analysis, and would leave no “more” to analyze.

By what heuristic should an Examiner choose the former option rather than the latter? Present guidance is unclear, yet it can make all the difference.

We believe such guidance may be simply stated:

³ Application 14/799,321, March 24, 2016, Action, page 3.

⁴ Application 14/098,971, May 20, 2016, Action, page 2.

⁵ Application 15/650,597, March 8, 2018, Action, page 5.

*Claim elements that recite a way of achieving a result cannot be deemed abstract.*⁶

It also bears repeating that the Examiner's identification of what is alleged to be abstract must be precise, and it must be confined to what courts have deemed to be abstract in precedential opinions.

The Office's *Berkheimer* guidance will make it more difficult for Examiners to dismiss claim elements as well-understood/routine/conventional. This may serve as a perverse incentive causing examiners to include *more* claim elements in their characterization of the Step 2A "abstract idea" (as in the Digimarc examples given above). Refined "abstract idea" guidance, targeted at deterring such unintended consequence, is thus needed.

Digimarc agrees with the AIPLA's suggestion that the Office instruct examiners to analyze all claim elements, both alone and in combination, under the step 2B analysis.⁷ This approach will further foreclose an end-run on the *Berkheimer* guidance. It will also reduce piecemeal parsing of claim language and ongoing ambiguity between step 2A and 2B analysis.

Dependent claims are more likely patent-eligible than independent claims, and deserve at least commensurate consideration

Patent applicants commonly present claims of differing scope. Dependent claims typically are narrower than independent claims. Too often, however, Examiners address all dependent claims in a summary, sweeping fashion – or not at all.

A few examples, from Office Actions received by Digimarc, illustrate the practice:

- "The dependent claims do not add significantly more to the abstract idea because they just add more algorithmic steps."⁸
- "Regarding claims 14-17, said claims further limit the abstract idea recited in claim 13. However, said claims fail to include additional elements that are sufficient to amount to significantly more than the judicial exception."⁹
- "Claims 52-80 do not remedy the problem and are rejected for the same rationale."¹⁰

⁶ The Supreme Court has repeatedly and consistently used the abstract idea exception to prevent patenting a result where "it matters not by what process or machinery the result is accomplished." *O'Reilly v. Morse*, 56 U.S. 62, 113 (1854). More recently the Court has explained that a patent may issue "for the means or method of producing a certain result, or effect, and not for the result or effect produced." *Diamond v. Diehr*, 450 U.S. 175, 182 n.7 (1981). In accord are Federal Circuit cases such as *Intellectual Ventures LLC v. Capital One*, 850 F.3d 1332 (2017) (sustaining ineligibility as directed to an abstract idea, "Indeed, the claim language here provides only a result-oriented solution, with insufficient detail for how a computer accomplishes it.")

⁷ See AIPLA comments at page 2.

⁸ Application 15/213,335, June 30, 2017, Action, page 2.

⁹ Application 15/593,045, November 16, 2017, Action, at page 8.

¹⁰ Application 15/332,262, June 28, 2017, Action, page 4.

Dependent claims are more likely to pass § 101 muster than their independent claims, by their narrower scope. Except where they are substantially similar to independent claims, Examiners should give dependent claims no less (and perhaps more) consideration than independent claims under Step 2B.

Examiners should be instructed that substantial evidence supporting the well-understood, routine, or conventional standard is required by the Administrative Procedure Act

The “well-understood/routine/conventional” guidance should be based, in part, on the Administrative Procedure Act. Different Federal Circuit panels sometimes use different language in describing the Step 2B standard. The APA, however, provides a statutory, over-arching standard. “*The reviewing court shall hold unlawful and set aside agency action, findings, and conclusions found to be ...unsupported by substantial evidence.*”¹¹

The MPEP already cites this APA provision in § 2144.03, “Reliance on Common Knowledge in the Art or ‘Well Known’ Prior Art.” Such citation seems appropriate in the Step 2B context as well.

“Inventive concept” should be consigned to the “dustbin of history;” the well-understood/routine/conventional test should not be confused with novelty and non-obviousness

The use of “inventive concept,” as an alternative formulation to the Step 2B test looking for “significantly more,” gives rise to confusion. “Inventive” has, through centuries of varied use, lost its value as a discriminative test (if it ever had any).

The Supreme Court expressed an apt truth 50 years ago in *Graham v. John Deere*:¹²

The truth is the word ‘invention’ cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty.

So, too, with the word “inventive.” Judge Plager recently wrote an eloquent concurrence criticizing use of “inventive concept” in connection with the Step 2B test:

Those who are familiar with the history of the Patent Act, when in 1952 the law of patenting was given a major statutory overhaul, will be the most puzzled. Is it the case that now, some 65 years later, we really have resurrected the concept of an ‘inventive concept’? The late Judge Giles Rich, the grand old man of patent law, whose portrait hangs in the place of honor in the Federal Circuit courthouse—how can he rest in peace? He was one of the acclaimed authors of the new Patent Act. At the time he, along with

¹¹ 5 U.S.C. § 706(2)(E) (emphasis added).

¹² *Graham v. John Deere*, 383 U.S. 1, 11-12 (1966).

many others, thought that the undefinable—truly abstract—concept of ‘inventive concept’ had been put into the dustbin of history by the specific criteria for a valid patent in the new Patent Act, specifically § 103, non-obvious subject matter.¹³

Evidencing the confusion that Plager decried, some now argue that compliance with § 101 requires that the machine or other element(s) employed in connection with an abstract idea must be new and non-obvious, based in part on the Supreme Court’s occasional use of “inventive concept” as a shorthand for the Step 2B test. Such assertion mischaracterizes the law.

It is wrong to say – as some contend – that in a Step 2B analysis, the additional element(s) must be new. In fact, novelty is of “no relevance” in determining eligibility, per *Diamond v. Diehr*:

In determining the eligibility of respondents' claimed process for patent protection under 101, their claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made. *The "novelty" of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the 101 categories of possibly patentable subject matter.*¹⁴

It is similarly wrong to say – as some contend – that in a Step 2B analysis, the additional element(s) must be non-obvious, and qualify as a patentable invention.

Again, per *Diehr*, a claim may be obvious and unpatentable, yet this does not affect its patent-eligibility:

In this case, it may later be determined that the respondents' process is not deserving of patent protection because it fails to satisfy the statutory conditions of novelty under 102 or nonobviousness under 103. *A rejection on either of these grounds does not affect the determination that respondents' claims recited subject matter which was eligible for patent protection under 101.*¹⁵

Since a claim may be both non-novel under § 102, and obvious under § 103, and yet still be patent-eligible under § 101, it is wrong to state that novelty and obviousness are requirements for § 101 eligibility.

Much of the confusion with § 101 law springs from the casual practice of lumping all judicial exceptions together, and trying to treat them identically. The precedential *Benson*, *Flook*, *Diehr*, *Mayo*, *Bilski*, *Alice*, etc., decisions each arose from a respective one of the exceptions, and raised respectively different issues to be conceptualized and analyzed.

¹³ *Interval Licensing LLC v. AOL, Inc.* (July 20, 2018, slip op’n at 29-30).

¹⁴ *Diamond v. Diehr*, 450 US 175, 188-9 (1981) (emphasis added).

¹⁵ *Diamond v. Diehr*, 450 U.S. 175, 191 (1981) (emphasis added).

Again, Judge Plager made the point well:

That ‘abstract ideas’ is the only one of the three at issue here is a critical point, in need of emphasizing. All too often courts discussing these three judicially created exceptions to patent eligibility lump them together, as if all three present the same set of issues to be conceptualized and analyzed. They do not. ‘Laws of nature’ and ‘natural phenomena’ have understandable referents, and thus have proven more amenable to workable definitions, or at least a reasonable degree of boundary-setting, and thus are more amenable to analysis.

However, when it comes to applying the concept of ‘abstract ideas’ to a challenged patent (or application for patent) as a distinct test of patent eligibility, the issues are different, and require close examination. The analytical structure which we now are to employ is provided by the Supreme Court’s recent teachings in *Alice Corp. v. CLS Bank International*. (*Alice* is often linked at citation- time to an earlier case, *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*; that case did not turn on the ‘abstract ideas’ formula, and is an example of the blending that can cause analytical confusion.)¹⁶

As this last sentence indicates, applying *Mayo* language to an “abstract idea” case is a mis-use of authority. So, too, is applying any Supreme Court case as controlling precedent in a situation analyzing a different judicial exception.

Incorrect assertions of law, such as those refuted above, are not uncommon. The Office may help untangle some of the confusion by more carefully distinguishing among the different judicial exceptions, and their respectively-different threads of eligibility analysis, in its future guidance.

More immediately, in Step 2B guidance, use of the shorthand “inventive concept” language should, to the extent practical, be left in the “dustbin of history.”

Thank you for the opportunity to present Digimarc’s views on these matters.

Respectfully submitted,

DIGIMARC, CORP.

By: /Joel Meyer/
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¹⁶ *Interval Licensing LLC v. AOL, Inc.* (July 20, 2018, slip op’n at 24-5).