

March 8, 2019

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: Eligibility2019@uspto.gov

Re: Response to 84 FR 50: 2019 Revised Patent Subject Matter Eligibility Guidance, Federal Register Volume 84, Issue 4 (Jan. 7, 2019)

Dear Under Secretary Iancu,

The following is responsive to the *Request for Comments on 2019 Revised Patent Subject Matter Eligibility Guidance, Federal Register Volume 84, Issue 4 (Jan. 7, 2019)*.

I write on behalf of Digimarc Corporation. Digimarc is a publicly traded company with over 200 employees, including 100 in research and development and engineering. Our 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. It appears we are not alone in this respect, based on the survey conducted by SMU's Professor Taylor inquiring into how recent eligibility case law has influenced investment in companies developing new technology.^[1]

We thus commend the Office's continuing efforts to develop guidelines concerning application of § 101.

^[1] Taylor, Patent Eligibility and Investment, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3340937, February 24, 2019.

We particularly commend development of guidelines and eligibility examples to bring clarity to the abstract idea analysis within the *Mayo/Alice* framework. We have observed that many Examiners struggle with the lack of clarity of the abstract idea analysis and as result:

- Broadly sweep all claim limitations into a conclusory finding that they recite an abstract idea without guidance as to how the claim elements correspond to subject matter that courts have deemed abstract;
- With such conclusory findings, leave nothing to be examined for significance under Step 2B;
- Consume additional prosecution time due to the lack of a pathway to mitigating abstractness concerns;
- Leave little clarity as to the boundary between Steps 2A and 2B;
- Yield inconsistent results that vary significantly across art units.

The revised Step 2A guidelines bring a needed rigor to analysis of whether a claim is directed to a judicial exception. Prong one mitigates the challenges we have observed by requiring identification of specific limitations that are believed to recite an abstract idea, and the type of abstract idea within the enumerated groupings. Examiners should be further trained how to identify specific limitations and clearly identify the type of abstract idea at issue.

Prong two further provides a pathway by which Examiners evaluate claim elements and practitioners refine them to integrate alleged abstract ideas into practical applications. This helps to clarify what is “directed to” a judicial exception in 2A and what is left to evaluate for well-understood, routine and conventional activity in 2B.

As an active innovator of image and audio signal processing technologies, we find the newly-provided eligibility examples instructive of how the *Mayo/Alice* framework should be applied in our field. Improper application of § 101 jeopardizes legitimate protection for innovations in machine vision, object recognition, and related signal processing technology, due to lack of clarity around abstract ideas. Examples 38, 39 and 41 provide valuable guidance for these technologies. Recent strides in artificial intelligence, machine learning and Internet of Things are critical to our economy and American competitiveness, yet these technologies are disproportionately impacted by vague application of § 101 to mathematical concepts and mental processes. The cited Examples make clear that elements based on mathematical concepts do not necessarily recite an abstract mathematical relationship or formula, and that limitations which cannot practically be performed in the human mind do not constitute an abstract mental process. We encourage the Office to continue developing instructive examples that illustrate proper application of the revised guidelines in different technology areas.

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

Respectfully submitted,

DIGIMARC, CORP.

By: /Joel Meyer/
Executive Vice President, Intellectual Property