

# Iancu Wants To Clear Up Patent Eligibility Of Abstract Ideas

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Law360 (September 24, 2018, 7:33 PM EDT) -- [U.S. Patent and Trademark Office Director Andrei Iancu](#) said Monday that the office is developing guidance for examiners **aimed at providing "significantly more clarity"** on when inventions are eligible for patenting, in part by specifically identifying patent-ineligible "abstract ideas."

In a speech at the [Intellectual Property Owners Association's](#) annual meeting in Chicago, Iancu said that **unclear recent case law has led to "distorted legal conclusions" about what is and is not patent-eligible under Section 101 of the Patent Act, "and it must end."**

He said that the office is "contemplating revised guidance" on the issue and would like public comments on what it should look like, but cautioned that any new proposal "would take some time to finalize." However, he described in some detail the changes the office is considering to address the **concerns of many attorneys and companies** that **the law on patent-eligibility has become muddled.**

Iancu said the guidance would be designed to solve what he identified as the two main problems with the current state of patent-eligibility law: first, that the eligibility analysis often improperly takes into account unrelated patentability issues like whether the claimed invention is obvious or lacks a proper written description, and second, **that there are no defined rules about what constitutes a patent-ineligible abstract idea.**

The eligibility analysis would be clearer, he said, if it were kept separate from other conditions of patentability and what can be considered an abstract idea were limited to a few specific categories, like mathematical formulas and economic practices.

Section 101 states that any "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" is eligible for a patent. However, Iancu said some recent case law takes eligibility and issues like obviousness found in other sections of the Patent Act and "mushes them all up."

The office is proposing to "keep rejections in their own distinct lanes," he said. "Let's stop commingling the categories of invention on one hand with the conditions for patentability on the other."

Whether or not an invention is novel or nonobvious should not be considered in determining whether to reject a patent as ineligible, as sometimes happens now, Iancu said. If the problems with a patent can be fixed by rewording the claims, it likely does not have an eligibility problem, he said, and the invention should potentially be rejected as obvious rather than ineligible.

Something ineligible for a patent, like gravity, "is not eligible no matter how new, how brilliant, and how carefully the claims are written," he said.

Supreme Court case law has also established that certain things are not patent-eligible, including natural phenomena, laws of nature and abstract ideas. Iancu said that the first two categories are relatively well-understood, while "abstract ideas, on the other hand, have proven more challenging to define. But a thorough review of the relevant case law helps us draw more clear lines."

He suggested the high court's decisions indicate that abstract ideas include the "basic tools of scientific

and technological work," and that the office aims to set a precise definition based on patents the high court found ineligible in recent high-profile cases like Alice v. CLS Bank and Bilski v. Kappos.

"What is the specific subject matter that is problematic and we must exclude?" Iancu said. "We must be clear, lest we perpetuate the current state. People should know up front. If nothing else, for the sake of a predictable ecosystem, let's be transparent."

He proposed three specific categories of patent-ineligible abstract ideas drawn from Supreme Court precedent: mathematical concepts like formulas and calculations, methods of organizing human interactions like fundamental economic practices and marketing and sales activities, and mental processes like forming evaluations or judgments.

Under the proposed new process, patent examiners would first look to see if the claims are a process, machine, manufacture or composition of matter, as required by the statute, he said. The examiner would then take a new step of determining if they recite natural phenomena, laws of nature or one of the three newly created categories of abstract ideas.

"If the claims at issue do not recite subject matter falling into one of these categories, then the 101 analysis is essentially concluded and the claim is eligible," he said. "This alone would resolve a significant number of cases currently confounding our system."

If the patent does fall into one of the three new categories, however, the examiner would have to decide whether the claims of the patent are "directed to" only those prohibited abstract ideas, and the patent would potentially be rejected if it is. If the excluded subject matter like a fundamental economic practice is integrated into a practical application, however, it is patent-eligible and the analysis would end, he said.

If not, the examiner would analyze whether the claimed invention is well-understood, routine and conventional, which would make it subject to rejection, as the office outlined in a **memo on eligibility** earlier this year.

Iancu said the office's proposed new approach to the eligibility analysis "provides significantly more clarity for the great bulk of cases." While determining whether an invention is patent eligible will still be difficult in some cases, "I suspect that the proposed approach would be significantly simpler," he said. "And we are certainly in need for some simplification."

"We have gotten ourselves into a rut when it comes to Section 101 analysis," he said. "With the proposed new guidance, the USPTO is trying to navigate our examiners out of that rut given the current statute and judicial precedent."

Iancu noted that the IPO and other industry groups have drafted **proposed legislation** aimed at providing more clarity on patent-eligibility. He said that if Congress moves forward on such a bill, the USPTO would be "very happy to help," but noted that "any legislative effort takes a long time, and the result is uncertain."

"In the meantime, the USPTO cannot wait," he said. **"We have thousands of examiners who struggle with these issues on a daily basis.** Our examiners need additional guidance now. And so do patent applicants, patent owners, and the public."

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# Director Iancu: If it was Good Enough for Judge Rich

September 24, 2018 Patent Dennis Crouch

*The following excerpt comes from Dir. Iancu's recent speech in Chicago where he discussed his proposal for expanding Section 101 patent eligibility. – DC*

Remarks delivered at the Intellectual Property Owners Association 46th Annual Meeting by Director of the U.S. Patent and Trademark Office Andrei Iancu, September 24, 2018 (Chicago, Illinois)

As delivered

Good morning everyone, and thank you, Henry [Hadad] for that generous introduction. And thank you for inviting me. . . .

. . . A significant part of the growth in [trademark] applications has come from China. . . . This has presented increased issues with the unauthorized practice of law from individuals outside the U.S. In light of this and other issues, we are considering a possible notice of proposed rulemaking that would require foreign trademark applicants and registrants to be represented by a U.S. licensed attorney to file trademark documents with the USPTO.

. . . **Now as to patents:** . . . I'll focus my remarks on a specific proposal for Section 101—patentable subject matter.

As many of you know, we recently issued to our examiners two new guidance memos on Section 101: the first dealing with the “conventionality” step in the *Mayo/Alice* framework, and the second on “methods of treatment” claims. Our data shows that these two memos have already improved the 101 analysis during examination.

But significantly more work needs to be done, especially on the “abstract idea” exception.

I know that IPO committees have been hard at work on a legislative fix to Section 101. Indeed, IPO and AIPLA have joined forces recently and proposed new statutory language. Should Congress be interested in moving forward with hearings or legislation, the USPTO would be very happy to help. As we all know, however, any legislative effort takes a long time, and the result is uncertain.

In the meantime, the USPTO cannot wait. **We have thousands of examiners who struggle with these issues on a daily basis.** Our examiners need additional guidance now. And so do patent applicants, patent owners, and the public. Whether through legislation or otherwise, there is a growing consensus that the issue must be promptly addressed.

**In fact, several Federal Circuit judges have recently filed concurrences or dissents explaining the uncertain nature of the law and calling for change.**

**In order to “work its way out of what so many in the innovation field consider are §101 problems,” Judge Lourie—in an opinion joined by Judge Newman—appealed to a higher authority. “Resolution of patent-eligibility issues requires higher intervention, hopefully with ideas reflective of the best thinking that can be brought to bear on the subject.”**

Judge Plager, in another case, **noted that “the state of the law is such as to give little confidence that the outcome is necessarily correct.”**

He explained that, given current §101 jurisprudence, it is **“near impossible to know with any certainty whether the invention is or is not patent eligible.” And he concluded that we currently have an “incoherent body of doctrine.”**

And Judge Linn explained that the abstract idea test is **“indeterminate and often leads to arbitrary results.”**

I agree with all these sentiments.

Judge Giles Rich, an icon of patent law with an unparalleled understanding of—and impact on—our system, stated, in 1979, the crux of the problem with respect to §101 jurisprudence. He said at the time that problems can arise due to the “unfortunate ... though clear commingling of distinct statutory provisions which are conceptually unrelated, namely, those pertaining to the categories of invention in §101 which may be patentable, and to the conditions for patentability demanded by the statute...” This was almost 40 years ago! How perceptive and prescient Judge Rich was.

**Let me put this in my own words: How can a claim be novel enough to pass 102 and nonobvious enough to pass 103, yet lack an “inventive concept” and therefore fail 101? Or, how can a claim be concrete enough so that one of skill in the art can make it without undue experimentation, and pass 112, yet abstract enough to fail 101? How can something concrete be abstract?**

These problems confound the most sophisticated practitioners in our patent system. People simply don't know how to draw these distinctions. If something is not inventive, then invalidate it under 102 or 103. If something is indefinite, or too broad to be fully enabled or described, then invalidate it under 112.

We have decades of case law from the courts and millions of examinations at the PTO which guide us in our 102, 103, and 112 analyses. People know these standards and how to apply these well-defined statutory requirements.

The genius of the 1952 Patent Act, of which Judge Rich is widely viewed as a principal author, was that it categorized the bases for patentability. Our recent §101 case law mashes them all up again. As Judge Rich said, this “may lead to distorted legal conclusions.” And it has. And it must end.

So I propose that we go back and heed Judge Rich's direction, and keep rejections in their own distinct lanes—as directed, in fact, by the 1952 Act. Let's stop commingling the categories of invention on one hand, with the conditions for patentability on the other. Section 101 is about subject matter. It is meant to address categories of matter that are not ever eligible on their own, no matter how inventive or well-claimed they are.

Here is a hint: If the claims can be fixed by slightly different claiming, by narrower claiming, or by more definite claiming, this is likely a “conditions” problem—not a subject matter problem. A pure discovery of nature, like gravity for example, is not eligible no matter how new, how brilliant, and how carefully the claims are written. This is an example of a subject matter issue. The category itself is problematic. Alright, but what are these problematic categories? I ask because I believe that we must define the categories for these exceptions clearly, lest—in Justice Clarence Thomas's words—we “swallow all of patent law.” Because—again quoting Justice Thomas—“at some level, ‘all inventions...embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’” Clearly, though, not all inventions are subject to a judicial exception. So what is the specific subject matter that is problematic and we must exclude? We must be clear, lest we perpetuate the current state. People should know up front. If nothing else, for the sake of a predictable ecosystem, let's be transparent.

And in particular, the issue needing most attention is, what precisely is the meaning of the “abstract idea” exception? Section 101 itself lists four categories: process, machine, manufacture, and composition of matter. The judicial exceptions should likewise be clearly categorized. As Judge Rich explained, when we deal with §101, “the sole question...is whether the invention falls into a named category, not whether it is patentable...”

So at the USPTO we are contemplating revised guidance to help categorize the exceptions—and indeed to name them—and instruct examiners on how to apply them.

More specifically, the contemplated guidance would do two primary things: First, it would categorize the exceptions based on a synthesis of the case law to date. And second, if a claim does recite a categorized exception, we would instruct examiners to decide if it is “directed to” that exception by determining whether such exception is integrated into a practical application. These two clarifications would help drive more predictability back into the analysis while remaining true to the case law that gave rise to these judicial exceptions in the first place.

So first, what exactly should be captured by the judicial exceptions to §101? In essence, and because we no longer want to mush subject matter with the conditions of patentability, the exceptions should capture only those claims that the Supreme Court has said remain outside the categories of patent protection, despite being novel, nonobvious, and well-disclosed. And what are the categories of inventions that the court told us that we should not patent even where the applicant demonstrates full compliance with Sections 102, 103 and 112? The Supreme Court gave us the answer: the “basic tools of scientific and technological work.”

And what are these “basic tools?” I believe that the Supreme Court has also told us that, at least through their examples. For example, they certainly include pure discoveries of nature, such as gravity, electromagnetism, DNA, etc.—all natural and before human intervention. So, no matter how brilliant the discovery of a certain DNA sequence in nature might have been, the court said we should not issue a patent in the absence of more. The *Myriad* case is a recent example.

Also, fundamental mathematics like calculus, geometry, or arithmetic per se. That is, no matter how novel and well-described Newton’s calculus may have been, it is still not patentable by itself. It can be thought of as abstract no matter what. Perhaps “inherently” ineligible, some might say. The *Benson* case is an example.

Some basic “methods of organizing human activity,” such as fundamental economic practices like market hedging and escrow transactions, have also been excluded by the Supreme Court in *Bilski* and *Alice*.

And the court has also warned against pure mental processes such as forming a judgment or observation. Again, by itself, something performed solely in the human mind can be thought of as abstract no matter how it is claimed.

The Supreme Court has been interpreting this statute for the past 200 years or so, and throughout that time has given only a limited number of examples of these “basic tools of scientific and technological work”—and arguably they can all generally fit into the categories I just mentioned. So let’s turn now and ask in a bit more detail, what do the various exceptions articulated by the Supreme Court really encompass? There is less difficulty with understanding the categories for laws of nature and natural phenomena.

Folks can arguably identify things like gravity or DNA in a claim. Abstract ideas, on the other hand, have proven more challenging to define. But a thorough review of the relevant case law helps us draw more clear lines. At the USPTO we have undertaken just such a review and have studied every relevant case in detail.

And so, the proposed PTO guidance would synthesize “abstract ideas” as falling into the following three categories:

- Mathematical concepts like mathematical relationships, formulas, and calculations
- Certain methods of organizing human interactions, such as fundamental economic practices commercial and legal interactions; managing relationships or interactions between people; and advertising, marketing, and sales activities
- Mental processes, which are concepts performed in the human mind, such as forming an observation, evaluation, judgment, or opinion.

Under the first step of the proposed guidance, we would first look to see if the claims are within the four statutory categories: process, machine, manufacture, or composition of matter. This is not new—we always do this. If statutory, we would then check to see if the claims recite matter within one of the judicial exceptions, categorized as I just mentioned. This is the new approach.

If the claims at issue do not recite subject matter falling into one of these categories, then the 101 analysis is essentially concluded and the claim is eligible. This alone would resolve a significant number of cases currently confounding our system. If an examiner does not find matter within the disallowed categories, he or she can move on.

Now, on the other hand, if the claims do recite subject matter in one of the excluded categories, the Supreme Court has instructed that we need to do more analysis. Specifically, the court instructed us that in such cases we need to decide whether the claims are “directed to” those categories.

To that end, we must first understand what the line is that the court wants us to draw to decide whether the claim is “directed to” an excluded category or not. The proposed new guidance would explain that Supreme Court jurisprudence taken together effectively allows claims that include otherwise excluded matter as long as that matter is integrated into a practical application. The line, in other words, delineates mere principles, on one hand, from practical applications of such principles, on the other. For example, in *Le Roy v. Tatham*, the court said in 1853 that “a new property discovered in matter, when practically applied in the construction of a useful article of commerce or manufacture, is patentable.” Then 128 years later, in *Diamond v. Diehr*, the court repeated that “an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” And recently, in *Mayo*, the court explained that “applications of such concepts to a new and useful end ... remain eligible for patent protection.”

And so, if the claim integrates the exception into a practical application, then the claim is not “directed to” the prohibited matter. In such cases, the claim passes 101 and the eligibility analysis would conclude. Otherwise, we would move to step 2 of *Alice*, for example as explained in the office’s *Berkheimer* memo from earlier this year.

It is important to note that the first step of our analysis does not include questions about “conventionality,” which are addressed in *Alice* Step 2. That is, it does not matter if the “integration” steps are arguably “conventional”; as long as the integration is into a practical application, then the 101 analysis is concluded. This helps to ensure that there is a meaningful dividing line between 101 and 102/103 analysis. A fully “conventional” yet patent-eligible claim may still be unpatentable as obvious. But it is better to address such a claim with obviousness law that has been developed over 65 years of practice.

The analysis also does not deny claims as ineligible merely because they are broad or functionally-stated or result-oriented. I understand the concern with certain types of broad, functionally defined claims that do not have sufficient support in the specification. But for these cases, USPTO examiners know, and will receive further guidance and training on, how to apply well-defined Section 112 principles.

Put another way, the examination does not conclude merely because we overcome Section 101; we must still examine for patentability under sections 102, 103 and 112. And so for claims that pass 101 because they do not articulate matter in a defined category, or that integrate the matter into a practical application, we can rest assured that other sections of the code should still prevent a patent if the claim is not inventive or is merely on a non-enabled or undescribed or indefinite idea.

In sum, the proposed guidance for Section 101, which addresses step 1 of *Alice*, would explain that eligibility rejections are to be applied only to claims that recite subject matter within the defined categories of judicial exceptions. And even then, a rejection would only be applied if the claim does not integrate the recited exception into a practical application. This provides significantly more clarity for the great bulk of cases.

Sure, there will be a number of cases that would still be difficult to resolve when we ask whether a claim is within one of the excluded categories, or whether it is a practical application of it. But for the vast majority of cases in the big middle, I suspect that the proposed approach would be significantly simpler. And we are certainly in need for some simplification.

For many claims right now, we have an option to reject or invalidate, for violations of patentability conditions, under either:

- A patentability condition such as 102, 103 or 112, or
- Section 101 subject matter.

Judge Rich was again perceptive, when he noted 40 years ago that "To provide the option of making such a rejection under either 101 or [a condition for patentability] is confusing and therefore bad law." Just as Judge Rich warned, we have gotten ourselves into a rut when it comes to Section 101 analysis. With the proposed new guidance, the USPTO is trying to navigate our examiners out of that rut given the current statute and judicial precedent.

And I hope other authorities will join in helping us get out of the rut, at least by keeping rejections in their lane and by clearly categorizing the subject matter of any exception. Please note that if we are to issue such revised new guidance, it would take some time to finalize. During that time, I welcome your comments and thoughts on this and any other proposal.

In the end, we all have the same goal in mind. Born of our Constitution and steeped in an inspiring history of world-changing innovation, the American patent system is a crown jewel, a gold standard. Working together, we can ensure increased clarity in the patent system, and thus ensure that the United States will continue to lead the world in innovation and technological development.

Thank you again for the opportunity to be with you here today. I would be happy to answer any questions you might have.