



July 31, 2014

The Honorable Margaret A. Focarino  
Commissioner for Patents  
United States Patent and Trademark Office  
Mail Stop Comments  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Attention: Caroline Dennison**

*Via email:* [alice\\_2014@uspto.gov](mailto:alice_2014@uspto.gov)

**Re: Comments on Preliminary Examination Instructions in View of the Supreme Court Decision in *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.***

Dear Commissioner Focarino:

In response to the June 30, 2014 Federal Register notice, BSA | The Software Alliance appreciates the opportunity to submit the following comments regarding the Patent and Trademark Office's Preliminary Examination Instructions in View of the Supreme Court decision in *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.* ("*Alice*").

BSA believes the preliminary guidelines are thoughtfully written and accurately portray the *Alice* decision, and we applaud the PTO for promptly issuing it. We believe that when the PTO issues more the detailed guidelines, it should continue the direction set forth in the preliminary guidelines and provide additional detail to ensure that examiners do not misinterpret the guidance. Providing examiners with the proper tools they need is vital because, unfortunately, we have seen a significant increase in the number of rejections under 35 USC 101 since the preliminary guidance was issued. These rejections often show an incomplete understanding of the *Alice* decision by the examiner using the *Alice* guidelines. It is important to fix this misinterpretation by the examiners based on their use of the *Alice* guidelines. We are concerned that if the misinterpretations continue, then the PTO will face an extraordinary number of appeals by applicants, which will strain its resources and further delay the examination process. Therefore, the *Alice* guidelines should explicitly advise examiners only to issue well-founded and well-reasoned rejections under 101 in factual scenarios that are clearly within the scope of Supreme Court precedent.

The preliminary guidance instructs examiners to undertake the two-part analysis described in the *Alice* and *Mayo* decisions. At the outset, it is imperative that the guidelines instruct examiners that when they issue a rejection under 101 they should clearly articulate their reasoning. Examiners also should be instructed to use specific evidence to avoid confusion.

Furthermore, although *Alice* clarified that all the judicial exceptions (i.e., abstract ideas, physical phenomena, and laws of nature) should be assessed using the same two-part analysis, this does not mean that the Office's guidance for each of these exceptions should be merged into a single set of guidelines. While it is likely that examiners will be required to apply the abstract idea exception in virtually all fields of technology to varying degrees, the law of nature and natural product exceptions will rarely – if ever – be relevant to claims directed to computer-implemented inventions and application of these exceptions will generally focus on claims relating to the chemical arts. For this reason, we would recommend keeping the *Myriad-Mayo* guidelines separate from the guidelines relating to *Alice* and *Bilski*. This will allow the respective guidelines to focus in more detail on the specific types of technology and claims that are most relevant to a particular exception.

### **Part 1**

The first part of the test requires examiners to determine whether a claim is directed to an abstract idea. The guidance should continue to emphasize that only claims that recite abstract ideas in a manner that monopolizes the basic tools of scientific and technological work are ineligible under this test.

The categories of abstract ideas cited should be modified as follows to accurately state Supreme Court precedent:

- Long-prevalent, fundamental economic practices and methods of organizing human activities<sup>1</sup> which embody these fundamental economic practices
- An idea of itself
- Mathematical relationships or formulas

Because it sometimes may be difficult for examiners to determine whether a claim falls squarely within one of these categories, the guidelines should clarify that most software claims directed either to algorithms or to functionality that is implemented on a device (typically a computer) are not abstract ideas unless they fall explicitly into one of these categories.

Such an instruction will make the guidelines consistent with the *Alice* opinion, which stated that – although the mere recitation of a general purpose computer or a reference to computer implementation does not suffice to establish eligibility – the practical application of a method that advances the state of technology or improves a technological process (e.g., by improving the functioning of a computer) does not fall within the exception, but rather is an *application* of an idea that is eligible for patent protection. Such a clarification is also consistent with the Federal Circuit precedent holding that a software algorithm constitutes a corresponding structure for purposes of 112(f), because an algorithm that suffices as the basis for, in effect, structural limitations on the scope of a claim cannot at the same time be deemed to be merely an abstract idea. (See e.g., *Aristocrat*).

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<sup>1</sup> We note that the preliminary guidance individually listed “certain methods of organizing human activities.” This term is not found in the majority opinion of either *Bilski* or *Alice*. In both cases, that point was made in the concurring opinions. Thus, it is not controlling law and it is questionable as to whether it should be mentioned in the PTO's guidance.

For these same reasons, the guidelines should explicitly state that, even when a claim includes steps related to a mathematical algorithm or fundamental economic practice, it is inappropriate to presume that the claim is directed to an “abstract idea.” Making such an assumption would be precisely the opposite of the analysis the Supreme Court mandated in *Alice*. This case and the Court’s section 101 case law more generally do not teach that the entirety of a business method or software algorithm is itself an abstract idea. Rather, the two-step analysis the Court adopted in *Mayo* requires an initial determination that the claim involves an abstract idea. Step two of the analysis requires a comparison of the claim to the “abstract idea” to determine whether any claimed element, or combination of elements, that ensures the claim amounts to “significantly more” than the abstract idea itself, indicating that the claim is directed not merely to an idea but to its practical application. This analysis first requires examiners to identify and clearly define an “abstract idea” that is distinct from the claimed invention. Only after the scope of the abstract idea has been clearly defined can the required comparison to an applicant’s claims be performed. As described in *Alice*, this analysis requires examiners to identify any additional steps, structural limitations, manner of implementation, and all other differences between the abstract idea and the claimed subject matter to determine whether these differences add enough that the claim that it amounts to something “significantly more” than the idea itself. Thus, in performing the required comparison, it vital that examiners properly define the “abstract idea” and faithfully identify any and all differences between the idea and the claimed subject matter. In doing so, it is critical that examiners avoid improperly equating a claimed method with the abstract idea and that they carefully consider both individual elements the claim as a whole to determine whether they – individually or in combination – provide meaningful limitations that narrow the scope of the claim to something less than the idea itself. Importantly, as illustrated by the Court’s analysis of the *Alice* patents, both *structural* limitations (e.g., recitation of a computer system or CRM) and *functional* limitations contained within the method steps (e.g., creation and or adjustment of shadow records) must be considered in performing the second part of the two-part analysis.

As described above, when conducting the analysis under step two, examiners *must* start by identifying the “abstract idea” that will serve as the point of comparison and should be required both to describe it with sufficient clarity to allow a meaningful comparison and to provide their rationale for concluding that the idea falls within the scope of the “abstract idea” exception as it has been defined in the Supreme Court case law (*i.e.*, consisting of a mathematical algorithm, fundamental economic practice, *etc.*). By definition, the identified idea must be abstract rather than particularized and will almost inevitably be more general than a claim to a computer-implemented method/algorithm or programmed computer. Only in very rare cases will a method or algorithm be described so generally and with so little detail as to recite the abstract idea itself. Typically, claims will differ in numerous ways from the abstract idea, requiring examiners to assess whether these differences are sufficient to ensure that the claim would not “wholly pre-empt” the abstract idea and “in practical effect ... be a patent on the [idea] itself.” *Benson v. Flook*, 437 U.S. at 587 (1978) (quoting *Tilghman v. Proctor*, 102 U.S. 707, 728 (1888)) (internal quotations omitted).

It is also vital that the guidelines warn examiners to avoid conflating the Section 101 eligibility analysis with those required to assess novelty, non-obviousness, enablement, and the other statutory requirements set forth in Sections 102, 103 and 112. The apparent similarities between the Supreme Court’s eligibility analysis and aspects of the inquiry required to assess novelty and obviousness create a significant risk of such conflation, leading to significant errors in the eligibility analysis. To avoid such errors, the guidelines should carefully explain that the Supreme Court’s references to the insufficiency of merely

"appending conventional steps, specified at a high level of generality" or reciting only "well-understood, routine, conventional activit[ies] previously known to the industry," *Alice*, 573 U. S. at \_\_\_ (internal citations omitted) in demonstrating the requisite "inventive concept" do not suggest – let alone explicitly incorporate – the novelty and non-obviousness requirements of Sections 102 and 103. The goal of the two-part *Mayo* analysis is to assess whether the claim contains "meaningful limitations" sufficient to ensure that its preemptive scope is not coextensive with the underlying "abstract idea."

As suggested by the Court's reasoning, the goal of considering of whether limitations added to the abstract idea are "conventional" or "routine" is not to assess their innovative merit – rather, whether an activity is conventional or unusual (*i.e.*, infrequently employed) is simply a useful indicium of whether its inclusion in the claim imposes any meaningful limitation on its scope. Conventional activities that are routinely (or necessarily) conducted in any conceivable application of an abstract idea have little or no practical impact on claim scope. (For example, if the claim is directed to a mathematical algorithm for adding two numbers to calculate their sum, including a generic data gathering or data input step or requiring that the relevant be recorded in a computer-readable medium are not meaningful limitations. These steps are both conventional and typically necessary to the mathematical operation and have no practical impact on preemptive scope.)

## **Part 2**

The second part of the analysis instructs examiners that only when the examiner has determined that an abstract idea is present in the claim, should the examiner undertake the analysis of step 2. This step requires the examiner to determine when any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the abstract idea itself.

The guidelines should clarify that this analysis requires that the claims be evaluated both element-by-element and as a whole, giving appropriate credit and weight to each and every limitation contained in a claim, and considering carefully whether these limitations – either individually or in combination -- describe subject matter that relates to:

- Improvements to another technology or technical field;
- Improvements to the functioning of the computer itself;
- Meaningful limitations beyond generally linking use of an abstract idea to a particular technological environment.

The guidelines should also emphasize that claimed interactions with a computer that improve the functioning of the computer (by improving user interaction efficiency, reducing processor load, reducing network bandwidth usage, etc.) are presumptively "meaningful limitations" that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Mayo*, slip op. at 3. Accordingly, an improvement to a technological process or to the functioning of a computer or other hardware device – although not conclusive in and of itself – weighs heavily in favor of – and will generally be sufficient to establish – patent eligibility. . Actual improvements to functionality, efficiency, versatility or efficacy of a technological process or a machine (including a general-purpose computer) is one of the most reliable indications that a claim is directed to a practical application (with a corresponding real-world benefit) rather than merely an abstract idea itself. This provides meaningful limitations beyond simply linking use of an abstract idea to a particular technological environment (or a generic computer), ensuring that the claim is appropriately limited and does not – in effect – preempt all

possible applications of an abstract idea. Additionally, the guidelines should instruct examiners to carefully consider whether a claimed computer or computing hardware is integral or ancillary (e.g., merely a convenient or useful means of implementation) to a claimed method.

Finally, the guidelines should instruct examiners to focus attention on and carefully consider the level of detail with which computer-implementation is recited in a claim. As the Court stated in *Mayo*, “*wholly generic* computer implementation is not generally the sort of ‘additional featur[e]’ that provides any ‘practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.’” *Mayo*, 566 U.S., at \_\_\_\_ (slip op., at 8–9) (emphasis added). In sum, if where a claimed computer is intrinsic to practicing the method or the computer implementation of the method is recited in significant detail, a claim should be presumed to be eligible absent strong countervailing evidence of unique circumstances that would render such limitations ineffective in meaningfully constraining the claim’s preemptive scope.

Sincerely

A handwritten signature in blue ink, appearing to read "Tim Molino", is written over a light-colored rectangular background.

Timothy Molino  
Director, Policy