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Mail Stop Comments – Patents
Commissioner for Patents
United States Patent & Trademark Office
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Via email: 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.*

Microsoft appreciates the opportunity to provide this submission in response to the June 30, 2014 Federal Register notice¹ inviting public comments on the preliminary examination guidance² issued in response to the Supreme Court's decision in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 573 U.S. ____ (2014). We commend the Office for providing clear, thoughtful, and prompt guidance to the Examining Corps. In Microsoft's view, the preliminary instructions accurately capture the guidance provided by the Supreme Court in the *Alice* decision, and no major changes are required to the substantive description, interpretation, or application of the *Alice* decision set forth in the preliminary instructions. Accordingly, our comments on the substantive interpretation of *Alice* are limited to suggesting two relatively minor changes regarding the examples of abstract ideas in the instructions that would improve the accuracy and clarity of the listed examples.

Despite the overall clarity of the guidance, however, we believe there is a significant risk of errors and frequent misapplication of the framework set forth in *Alice*.³ In particular, we are concerned that examiners will face substantial practical challenges in applying the *Alice* framework in a consistent and

¹ *Request for Comments and Extension of Comment Period on Examination Instruction and Guidance Pertaining to Patent-Eligible Subject Matter*, 79 Fed. Reg. 36786 (June 30, 2014).

² June 25, 2014 Memorandum from the Office of the Deputy Commissioner for Patent Examination Policy to the Examining Corps: *Preliminary Examination Instructions in view of the Supreme Court Decision in Alice Corporation Pty. Ltd. v. CLS Bank International, et al.* (http://www.uspto.gov/patents/announce/alice_pec_25jun2014.pdf).

³ See also *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. ____ (2012).

predictable manner due to the lack of objective standards for determining eligibility and the absence of an established body of case law to guide the application of the Court’s “significantly more” standard. Although the responsibility for providing additional clarity and guidance on application of the *Alice-Mayo* framework lies with the Federal Circuit and Supreme Court, the Office has both the authority and obligation to ameliorate – to the extent possible – the risk of inconsistent and arbitrary outcomes in examination.

To that end, we suggest that the Office adopt several measures intended to minimize the potential for serious errors by examiners in determining eligibility using the *Alice* analysis. The most important of these is to require examiners to explain their reasoning and conclusions when making a Section 101 rejection, which would provide a basis for identifying and addressing serious errors in applying the *Alice* framework. Unfortunately, most of the Section 101 rejections we have seen since *Alice* provide no explanation of the examiner’s reasoning and often consist of little more than the conclusory statement that the claims are drawn to an abstract idea and do not amount to significantly more than the idea itself. Absent a more rigorous explanation of the reasoning that led to a rejection, it will be virtually impossible even to assess whether examiners are correctly applying the two-step inquiry, let alone identify and address common sources of error to ensure reasonable consistency in determining eligibility.

Finally, we comment briefly on the importance of focusing the discussions and examples included in examination guidelines to the subset of examiners for whom the guidance is most relevant. Following the Court’s clarification in *Alice* that the two-step framework is not limited to the law of nature and natural product but is equally applicable across all the judicial exceptions, there has been some discussion of merging the *Bilski*, *Myriad-Mayo*, and *Alice* guidance into a single set of guidelines addressing application of the patent eligibility analysis across all the judicial exceptions and to inventions across all fields of technology. As discussed below, we believe that this would be a mistake and would result in guidance that was less clear, less focused, and less relevant to examiners.

1. Suggested Changes to the Examples of Abstract Ideas Referenced in *Alice*.

As stated in the introduction, we found the Office’s memo setting forth the preliminary instructions to be careful, balanced, and accurate in both its description of the *Alice* decision and its articulation of the key principles and factual considerations the Court identified as relevant to evaluating the patent eligibility of claims that incorporate subject matter falling within one of the judicially-articulated exceptions to statutory subject matter under Section 101. In general, the discussion of *Alice* is faithful to the text and meaning of the Court’s opinion and provides clear explanations and an appropriate level of detail for the intended audience.

The only exception, in our view, involves the list of “[e]xamples of abstract ideas referenced in *Alice Corp.*” found on page two of the memo. We believe that this portion of the guidance should be revised in two respects:

- By removing the reference to “certain methods of organizing human activity”; and
- By providing at least a brief description of each category of subject matter listed as an example.

Our suggestion that “certain methods for organizing human activity” be excluded from the list of examples is based on two different rationales. First, it is unclear to us that the Court’s use of this phrase in the majority opinion suggests any agreement with or endorsement of the notion that methods for organizing human activity fall within the “abstract idea” judicial exception. Rather, the passing reference to this term occurs in a sentence describing an argument made in the Petitioner’s brief, and we would question whether this is a sufficient basis for including it in the list of examples. Additionally,

even if the majority's reference is read to express tacit approval, the phrase "methods of organizing human activity" is rarely used (let alone discussed) in the case law and lacks any established meaning, creating a significant risk of inconsistent interpretation and application by individual examiners.

Our second suggestion (providing additional description of listed examples) is premised simply on the belief that the intended meaning of the phrases used to describe the listed examples may not be self-evident to most examiners. Given the inherent ambiguity of phrases such as "fundamental economic practices" and "an idea of itself," we believe it is important to provide examiners with additional information regarding their intended meaning and application. This is particularly essential for those terms – such as "algorithm" – that have acquired a specific or idiosyncratic meaning in the relevant case law based either on its use in a specific context as a term of art or because it has been explicitly defined by the courts. . Additionally, listing these phrases without explanation fails to convey the meanings they have acquired in the case law. For example, the Supreme Court has given the terms "algorithm" and "mathematical algorithm" a very specific meaning. As used in their case law, the meaning of these terms includes only mathematical formulas (which the Court has referred to as "algorithms" on several occasions) and "procedure[s] for solving a given type of mathematical problem." *Flook*, 437 U.S. at 585. The Court confirmed this understanding in *Diehr*, disavowing the "significantly broader" popular understanding of algorithm to mean "[a] fixed step-by-step procedure for accomplishing a given result" and emphasizing that the statements in *Benson*⁴ and *Flook* "regarding the patentability of 'algorithms' are necessarily limited to the more narrow definition employed by the Court." 450 U.S. at 186 n.9.

Providing the additional information necessary to convey the intended meaning of these terms of art would not require significant effort and, in most cases, could be accomplished with one or two sentences paraphrasing or quoting statements from leading precedents that characterize or define the term. For example, a simple sentence indicating that courts have defined "algorithm" and "mathematical algorithm" as being limited to mathematical formulas that are recited as a claim limitation and specific "procedure[s] for solving a given type of mathematical problem" would, in our view, require relatively little effort and would provide significant additional clarity. In cases where Courts have not expressly attributed a particular meaning to a term, a general statement about how the term has been used would suffice. For example, to the extent the Office chooses to retain the reference to "methods of organizing human activity" in the listed examples, we believe it would be beneficial if it were accompanied by an explanation that the phrase has generally been used to refer to business methods. To the extent it would be helpful, we would be pleased to provide additional input regarding this suggestion and stand ready to provide any appropriate assistance in its implementation.

2. The Office Should Ensure Careful Interpretation of the Judicial Exceptions and Application of the *Alice-Mayo* Analysis.

As the Supreme Court acknowledged in *Mayo*, an overly-broad interpretation or application of the judicial exclusions "could eviscerate patent law" because "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas."⁵ This danger is inherent in the form of analysis mandated by *Alice*, which involves a two-step inquiry consisting of:

- a. Determining whether the claim is directed to an abstract idea; and

⁴ *Gottschalk v. Benson*, 409 U.S. 63 (1972).

⁵ *Mayo*, 132 S. Ct. at 1293.

- b. If so, determining whether 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 risk identified by the Court comes principally from two potential sources of error in applying the analysis. The more obvious of these arises from Step Two’s requirement of “meaningful” limitations, which cannot be satisfied by routine and conventional steps, insignificant extra-solution activities, or mere field of use limitations. As the Court noted, this process of abstracting away from the claim by disregarding “insignificant” limitations will – if taken too far – render every possible type of invention ineligible.

The second and less obvious source of error lies in identifying the “abstract idea” to which the claims must add “significantly more.” Particularly in the context of software-related inventions, there is a risk of defining the “abstract idea” too broadly by equating it with the claimed algorithm. This error often results from inappropriate claim dissection where only the hardware/physical elements are considered as potentially significant limitations and everything else (*i.e.*, any limitations not embodied in hardware) is presumed to comprise the “abstract idea.” Because innovations in the software field are typically claimed as a novel algorithm paired with known, general-purpose hardware (typically a generic computer), the hardware elements are only rarely deemed to be sufficiently limiting to qualify as “meaningful limitations.” As a result, this type of claim dissection will almost inevitably lead to the conclusion that any software-related claim is directed to an ineligible abstract idea.

This flawed approach is almost 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 presumed to be an abstract idea. Rather, the abstract idea is the generalized concept or principle implemented by the method or algorithm. Thus, in *Alice*, the Court identified the relevant abstract idea as the general concept of “intermediated settlement” and then assessed whether any of the claims at issue comprised “significantly more” than the generic concept. In doing so, the Court did not simply assume that the method steps involving creation and adjustment of shadow records to be part of the abstract idea. Rather, it treated the hardware and non-hardware elements equally as limitations that could potentially supply the required “significantly more.”

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, a claim will differ in numerous ways from the generic abstract idea that underlies it, 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). By assuming that all non-hardware elements are part of the abstract idea, the claim dissection approach described above begs the question of whether the claims amount to “significantly more” rather than answering it.

To help examiners avoid these errors we suggest that the guidelines instruct examiners to take a careful approach to applying the *Alice* analysis by:

- Carefully construing the judicial exceptions to avoid improperly extending their scope to categories of subject matter not explicitly considered by the courts;
- Including multiple examples contrasting eligible and ineligible claims directed to similar subject matter and identifying what differences in the claims were determinative in reaching different

conclusions as to eligibility (*i.e.*, explaining what in hypothetical Claim A makes it eligible, while hypothetical Claim B – which is similar in many respects to Claim A – is not) to illustrate situations where an algorithm or computerized method amounts to “significantly more” because, for example, the claim recites the algorithm or computer implementation in enough detail to constitute a “practical application” of an abstract idea rather than the idea itself;

- Emphasizing (both in the text of the guidelines and in future examiner training materials) the importance of strict adherence to the *Alice* two-step process – with each step being performed independently and in the correct order – and the need to separately identify and describe a distinct “abstract idea” in Step One, rather than merely subtracting the hardware/physical elements of a claim and characterizing everything that remains as abstract; and
- Where the analysis results in a rejection, requiring examiners to provide a clear explanation of the reasons for the rejection, including: identification and description of the “abstract idea” identified in Step One, a list of the differences between the claimed subject matter and the abstract idea considered in Step two, and an explanation of why these differences were insufficient to meaningfully differentiate the claimed subject matter from the abstract idea.

3. The Office Should Maintain Current Practice of Providing Separate Guidelines and Examiner Training for the Different Judicial Exceptions.

Although we agree with the Office that *Alice* “establishes that the same analysis should be used for all types of judicial exceptions,” we read the case to mean that the same basic two-part analysis is applicable to all of the exceptions and **not** that the specific principles and factors the Court has recited in the context of one of the exceptions are necessarily appropriate and relevant to each of the others.

For example, while it is likely that examiners will have occasion to apply the abstract idea exception in virtually all fields of technology, the law of nature and natural product exceptions will rarely – if ever – be relevant to claims directed to software-related or computer-implemented inventions. Moreover, many of the considerations involved in applying these exceptions are context-specific and of little or no relevance to the “abstract idea” analysis.

As a result, we do not see any potential benefit to merging the existing guidance addressing specific judicial exceptions into a single, generally-applicable guideline. At best, doing so would involve expending significant effort for little or no practical benefit. At worst, it would make the guidance more generic and less clear, reducing its effectiveness. Additionally, because the examples and analyses for the “abstract idea” and the “law of nature/natural product” exceptions will typically be used by different groups of examiners, integrating the examples and analyses seems likely to lead to confusion among examiners, potentially misleading them regarding the applicability of Supreme Court precedents and risking the misapplication of case law based on inappropriate analogies or inferences drawn from precedents relating to exceptions other than the one that is being applied.

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 and reduce the potential for misunderstandings. As discussed above in relation to our suggestion for clarifying the intended meaning of particular terms of art, we believe that this contextual information and examples will often enhance examiners’ understanding and add significant clarity to the guidelines and that preserving the relevance and effectiveness of such information strongly argues in favor of maintaining

the current separation between the guidelines addressing the law of nature and the abstract idea exceptions.

Conclusion

In conclusion, we would again like to applaud the Office for actively soliciting public input on the complex issues arising from the Supreme Court's evolving Section 101 jurisprudence and resulting uncertainty about the appropriate application of the Court's recent precedents in evaluating patent eligibility. Microsoft also greatly appreciates the USPTO's transparent and collaborative approach to implementing regulatory and legal changes in the patent area. We look forward to further opportunities to work in partnership with the Office to advance its efforts to increase the transparency of patent ownership and improve the clarity and quality of software-related claims.

Respectfully Submitted,

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