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MEMORANDUM

DATE: August 4, 2025

TO: Technology Centers 2100, 2600, and 3600

FROM: Charles Kim
Deputy Commissioner for Patents

SUBJECT: Reminders on evaluating subject matter eligibility of claims under 35 U.S.C. 101

Examiners in software-related arts, including Artificial Intelligence (AI) and Machine Learning, often encounter challenges in evaluating whether the claims are directed to a judicial exception when analyzing claims for subject matter eligibility. This memorandum provides important reminders pertaining to the United States Patent and Trademark Office's (USPTO's) subject matter eligibility guidance, articulated in the Manual of Patent Examining Procedure (MPEP), to aid examiners in these evaluations. Specifically, this memorandum provides guidance on the following topics that arise when examiners assess Step 2A of the USPTO's subject matter eligibility analysis: (a) reliance on the mental process grouping of abstract ideas; (b) distinguishing claims that recite a judicial exception from claims that merely involve a judicial exception; (c) analysis of the claim as a whole; and (d) consideration of whether a claim is directed to an improvement in the functioning of a computer or "any other technology or technical field,"[1] or whether a computer is merely being used as a tool to perform the recited abstract idea (*i.e.*, "apply it"). In addition, this memorandum includes a discussion of when a subject matter eligibility rejection should be made. This memorandum is not intended to announce any new USPTO practice or procedure and is meant to be consistent with existing USPTO guidance. Examiners should consult the specific MPEP sections referenced below for more thorough information on each topic.

I. The USPTO's Patent Subject Matter Eligibility Guidance

The MPEP (9th Edition, Rev. 01.2024), published in November 2024, includes the current examination guidance related to subject matter eligibility. Examiners should refer to MPEP sections 2103 to 2106.07 for guidance on 35 U.S.C. 101.

[1] *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 225 (2014) (*Diamond v. Diehr*, 450 U.S. 175, 177-78 (1981)).

In addition, the *2024 Guidance Update on Patent Subject Matter Eligibility, Including on Artificial Intelligence* published on July 17, 2024 (89 FR 58128) (AI-SME Update), provides further explanation on Step 2A of the USPTO's subject matter eligibility analysis. This guidance update will be incorporated into the MPEP in due course.

The USPTO has also issued several examples illustrating subject matter eligibility analyses of claims under the Office's eligibility guidance, including AI-focused examples that were issued in July 2024 ("July 2024 Subject Matter Eligibility Examples"[2]).

II. Analyzing Claims for Patent Eligible Subject Matter

Examiners should determine whether a claim satisfies the criteria for subject matter eligibility by evaluating the claim in accordance with the flowchart provided in MPEP 2106, subsection III.[3] It is essential that the broadest reasonable interpretation (BRI) of the claim be established prior to examining a claim for eligibility.[4]

A. Step 2A Prong One

Step 2A has two prongs. The first prong (Step 2A Prong One) is a determination of whether a claim recites a judicial exception, *i.e.*, whether the claim ***sets forth*** or ***describes*** an abstract idea, law of nature, or natural phenomenon.[5] Examiners, especially in the software-related arts, often encounter "abstract idea" type judicial exceptions in claims. The USPTO's subject matter eligibility analysis distills the relevant case law into three enumerated groupings of abstract ideas: mathematical concepts, certain methods of organizing human activity, and mental processes.[6]

Mental process grouping: The courts consider a mental process (thinking) that "can be performed in the human mind, or by a human using a pen and paper," to be an abstract idea.[7] The USPTO subject matter eligibility analysis follows this precedent and instructs examiners to determine that a claim recites a mental process when it contains limitation(s) that can practically be performed in the human mind, including, for example, observations, evaluations, judgments, and opinions. On the other hand, a claim does not recite a mental process when it contains limitation(s) that cannot practically be performed in the human mind, for instance when the human mind is not equipped to perform the claim limitation(s).

The mental process grouping is not without limits. Examiners are reminded not to expand this grouping in a manner that encompasses claim limitations that cannot practically be performed in the human mind. The MPEP and the AI-SME Update provide examples of claim limitations that cannot be practically performed in the human mind.[8] Claim limitations that encompass AI in a way that cannot be practically performed in the human mind do not fall within this grouping.

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[2] *Available at* July 2024 Subject Matter Eligibility Examples.

[3] The flowchart in MPEP 2106, subsection III has been updated in the AI-SME Update to include reference to *Alice/Mayo* Steps 1 and 2 and to include a dotted line around Step 2A (*Alice/Mayo* Step 1).

[4] MPEP 2106, subsection II.

[5] *See* MPEP 2106.04 for a detailed discussion of eligibility in Step 2A.

[6] *See* MPEP 2106.04(a).

[7] *See* MPEP 2106.04(a)(2), subsection III.

[8] *See, e.g.*, the AI-SME Update, pg. 58136 discussing an example where a claim that does not recite a mental process because it cannot practically be performed in the human mind is a claim to ''a specific, hardware-based

Distinguishing claims that recite a judicial exception from claims that merely involve a judicial exception: Examiners should be careful to distinguish claims that recite an exception (which require further eligibility analysis) from claims that merely involve an exception (which are eligible and do not require further eligibility analysis).[9]

Consider for example, the published USPTO examples 39, which illustrates claim limitations that merely involve an abstract idea, and 47, which shows limitations that recite an abstract idea.[10] The claim limitation "training the neural network in a first stage using the first training set" of example 39 does not recite a judicial exception. Even though "training the neural network" involves a broad array of techniques and/or activities that may involve or rely upon mathematical concepts, the limitation does not set forth or describe any mathematical relationships, calculations, formulas, or equations using words or mathematical symbols. Contrast this with the limitation "training, by the computer, the ANN based on the input data and a selected training algorithm to generate a trained ANN, wherein the selected training algorithm includes a backpropagation algorithm and a gradient descent algorithm" of claim 2 of example 47. This limitation requires specific mathematical calculations by referring to the mathematical calculations by name, *i.e.*, a backpropagation algorithm and a gradient descent algorithm, and therefore recites a judicial exception, namely an abstract idea.

B. Step 2A Prong Two

After determining that a claim recites a judicial exception, at Step 2A Prong Two, examiners evaluate whether the claim as a whole integrates the recited judicial exception into a practical application of the exception. Examiners should use the considerations discussed in MPEP 2106.04(d), subsection I in accordance with the procedure described in MPEP 2106.04(d), subsection II to evaluate whether the additional elements integrate the judicial exception into a practical application. Many of these considerations overlap, and often more than one consideration is relevant to the analysis of an additional element.[11] However, not all considerations will be relevant to every element, or every claim.

Analysis of claim as a whole: The analysis in Step 2A Prong Two considers the claim ***as a whole***. The way in which the additional elements use or interact with the exception may integrate the judicial exception into a practical application. Accordingly, the additional limitations should not be evaluated in a vacuum, completely separate from the recited judicial exception. Instead, the analysis should take into consideration all the claim limitations and how these limitations interact

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RFID serial number data structure'' (i.e., an RFID transponder), where the data structure is uniquely encoded (i.e., there is ''a unique correspondence between the data physically encoded on the [RFID transponder] with pre-authorized blocks of serial numbers''), *ADASA Inc. v. Avery Dennison Corp.*, 55 F.4th 900, 909 (Fed. Cir. 2022). *See also* MPEP 2106.04(a)(2), subsection III(A).

[9] *See* MPEP 2106.04,subsection II(A)(1) for a discussion on the distinction between "recites" (i.e., sets forth or describes) and "involves" (i.e. based on) a judicial exception. *See also, e.g., Ex Parte Linden*, No. 2018-003323, 2019 WL 7407450 (PTAB April 1, 2019).

[10] *See* Subject Matter Eligibility Examples 37 to 42 for Example 39 (Method for Training a Neural Network for Facial Detection), *available at* Subject Matter Eligibility Examples 37 to 42; and July 2024 Subject Matter Eligibility Examples for Example 47 (Anomaly Detection).

[11] *See* MPEP 2106.04(d).

and impact each other when evaluating whether the exception is integrated into a practical application.[12]

While an additional limitation (or combination) that merely applies the judicial exception on a generic computer may not render a claim eligible on its own, an additional limitation (or combination) that meaningfully limits the judicial exception can render it eligible.

Improvements consideration: In computer-related technologies, examiners can conclude that claims are eligible in Step 2A Prong Two by finding that a claim reflects an improvement to the functioning of a computer or to another technology or technical field, integrating a recited judicial exception into a practical application of the exception. This consideration has also been referred to as the search for a technological solution to a technological problem. An important consideration in determining whether a claim improves technology or a technical field is the extent to which the claim covers a particular solution to a problem or a particular way to achieve a desired outcome, as opposed to merely claiming the idea of a solution or outcome.[13] The examiner is reminded to consult the specification to determine whether the disclosed invention improves technology or a technical field, and evaluate the claim to ensure it reflects the disclosed improvement. The specification does not need to explicitly set forth the improvement, but it must describe the invention such that the improvement would be apparent to one of ordinary skill in the art. The claim itself does not need to explicitly recite the improvement described in the specification.

"Apply it" consideration and overlap with improvements consideration: Another consideration when determining whether a claim integrates a judicial exception into a practical application in Step 2A Prong Two is whether the additional elements amount to more than a recitation of the words "apply it" (or an equivalent) or mere instructions to implement an abstract idea or other exception on a computer.[14]

Examiners are cautioned not to oversimplify claim limitations and expand the application of the "apply it" consideration.[15] Moreover, examiners are reminded that the "apply it" consideration often overlaps with the improvements consideration.[16] When evaluating these two considerations, examiners may consider the following:

1. Whether the claim recites only the idea of a solution or outcome, *i.e.*, the claim fails to recite details of how a solution to a problem is accomplished, or the claim covers a particular solution to a problem or a particular way to achieve a desired outcome.
2. Whether the claim invokes computers or other machinery merely as a tool to perform an existing process, or whether the claim purports to improve computer capabilities or to improve an existing technology.

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[12] *See* MPEP 2106.04(d), subsection III.

[13] *See* MPEP 2106.05(a) (discussing *DDR Holdings, LLC. v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014); *Amdocs (Israel), Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300-01 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314-15 (Fed. Cir. 2016)).

[14] MPEP 2106.05(f).

[15] *See* MPEP 2106.05(a) (discussing that "examiners should be 'careful to avoid oversimplifying the claims' by looking at them generally and failing to account for the specific requirements of the claims"). *See also* MPEP 2143.03 ("Examiners must consider all claim limitations when determining patentability of an invention over the prior art.")

[16] *See* MPEP 2106.05(a) and (f) for a more detailed discussion of these two considerations.

3. The particularity or generality of the application of the judicial exception.

For example, the examiner should consider whether the technological limitations are being used as a tool to improve the recited judicial exception (*e.g.*, automating a manual business process) or whether the claim as a whole provides an improvement to technology or a technical field.[17] Claims that are determined to improve computer capabilities or improve technology or a technical field support a finding that the claim integrates the judicial exception into a practical application or amounts to significantly more than the judicial exception itself.

While this memorandum focuses on the "apply it" and improvements considerations, examiners are reminded that there are other judicial considerations to evaluate whether additional elements in the claim integrate a judicial exception into a practical application at Step 2A Prong Two[18] or amount to an inventive concept at Step 2B.[19]

III. Reminders on Deciding Whether to Make an SME Rejection

Examiners are reminded that if it is a "close call" as to whether a claim is eligible, they should only make a rejection when it is more likely than not (*i.e.*, more than 50%) that the claim is ineligible under 35 U.S.C. 101.[20] A rejection of a claim should not be made simply because an examiner is uncertain as to the claim's eligibility. In order to make a rejection of a claim under any of the statutory bases (*i.e.*, 35 U.S.C. 101, 102, 103, 112), unpatentability must be established by a preponderance of the evidence.

Under the principles of compact prosecution, regardless of whether a rejection under 35 U.S.C. 101 is made in a first Office action, based on lack of subject matter eligibility, a complete examination should be made for every claim under each of the other patentability requirements (*e.g.*, 35 U.S.C. 102, 103, 112). Examiners should state all non-cumulative reasons and bases for rejecting claims in the first Office action.

IV. Training Resources

Training resources are available on the 35 U.S.C. 101 intranet webpage. The training includes both introductory and advanced modules on guidance in the MPEP as well as training on the AI-SME update.

The webpage also includes current subject matter eligibility materials including the AI-SME update and the July 2024 Subject Matter Eligibility Examples. Earlier examples, the index of examples, and other materials may be found on the USPTO subject matter eligibility internet webpage.

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[17] *Compare Recentive Analytics, Inc. v. Fox Corp.*, 134 F.4th 1205 (Fed. Cir. 2025) (steps incidental to automating an abstract idea were not sufficient to confer eligibility), *with* USPTO Example 47, claim 3 (the claim as a whole improved the technical field of network intrusion detection).

[18] *See* MPEP 2106.04(d)(2) and 2106.05(b)-(c), (e) and (g)-(h) for a list of other judicial considerations that are evaluated at Step 2A Prong Two.

[19] *See* MPEP 2106.05(b)-(e) and (g)-(h) for a list of other judicial considerations that are evaluated at Step 2B.

[20] MPEP 706(I) discusses that the standard to be applied in all cases is the "preponderance of the evidence" test.