



Comments of United for Patent Reform Regarding the Patent Subject Matter Eligibility Guidance

Overview

United for Patent Reform (“UFPR”) is a broad coalition of American businesses advocating for a patent system that ensures high quality patents, advances meaningful innovation, and protects legitimate American businesses from unnecessary patent litigation. Our members range from Main Street retail shops, REALTORS®, hotels, grocers, convenience stores, and restaurants to national construction companies, automobile manufacturers, and technology businesses. Collectively, our members represent over 80 million U.S. employees, a figure that accounts for nearly two-thirds of private sector jobs in the United States.

The proper definition and implementation of § 101’s patent eligibility requirement is of great importance to UFPR members, who have frequently faced baseless litigation brought by non-practicing entities (NPEs) asserting business method patents. Even when a court would predictably strike down such a patent as ineligible under § 101, many UFPR members are forced to settle because they cannot afford to litigate. Because the cost of patent litigation and unjustified settlements can be devastating to our members, UFPR has actively advocated for sound law on patent eligibility. For instance, UFPR’s Chair [testified before Congress](#) on the proper interpretation of the statute and the importance of the Supreme Court’s *Alice* decision to UFPR member companies. UFPR also submitted [comments](#) in response to the PTO’s Request for Comments on the Current State of Patent Eligibility Jurisprudence in the United States, 86 Fed. Reg. 36257-60. UFPR appreciates this opportunity to provide input on the PTO’s Examination Guidance for 35 USC § 101, found in the Manual for Patent Examination Procedure (MPEP) § 2106 (“the Guidance”).

Unfortunately, the PTO’s Examination Guidance for § 101 provides instructions that are contrary to controlling precedent from the Court of Appeals for the Federal Circuit and the Supreme Court. As such, the Guidance creates a significant danger that examiners will allow patents that a court could later strike down as ineligible, but only after cash-strapped businesses must choose between paying an unjustified settlement or engaging in expensive patent litigation. The most glaring and consequential of these mistakes occurs in MPEP § 2106.04, which instructs examiners that claims are patent eligible, even if they recite a judicial exception, if those claims show that the judicial exception is “integrated into a practical application.” This “practical

application” test does not exist in case law and, therefore, must be eliminated from the MPEP. It should be replaced with the standard for whether a claim is “directed to” ineligible subject matter on which the controlling case law has settled: “what the patent asserts to be the focus of the claimed advance over the prior art.”

The Controlling Case Law

The incorrect “practical application” test is found in Step 2A of the Guidance, which corresponds to step 1 of the Supreme Court’s *Alice* analysis.¹ The question raised by *Alice* step 1 and Guidance Step 2A is whether a claim is “directed to” a judicial exception.² The Federal Circuit has elaborated upon its approach to the *Alice* step 1 analysis in many cases and refined that inquiry, stating, “[w]e have approached the Step 1 “directed to” inquiry by asking “what the patent asserts to be the ‘focus of the claimed advance over the prior art.’”³

The Federal Circuit’s § 101 case law has settled on this articulation of *Alice*’s step 1 “directed to” inquiry, repeating it in the majority of abstract idea cases over the past few years.⁴ The court highlighted the centrality of this instruction to the *Alice* analysis as recently as August 2022 in *In re Killian*.⁵ This articulation also fully captures the concerns of earlier abstract idea cases in which the court did not explicitly make this statement, but instead looked at important factors, such whether “the focus of the claim is on [a] specific improvement in computer capabilities,”⁶ and whether that improvement was specific, rather than claiming only a desirable result or function.⁷ These earlier cases raise a more specific version of the inquiry into “what the patent asserts to be the focus of the claimed advance over the prior art” that will often be appropriate for software-related claims. As such, this line of authority fully supports the Federal Circuit’s now-settled approach to *Alice*’s “directed to” inquiry while simultaneously providing “further guidance [for] familiar classes of claims.”⁸

¹ *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217-19 (2014) (establishing a two step analysis for whether a claim falls outside of § 101).

² If a claim is directed to a judicial exception, in step 2 of the *Alice* analysis, a court then examines the elements of the claim to determine whether it contains an inventive concept sufficient to transform the claimed judicial exception into a patent-eligible application. *Id.* at 221.

³ *TecSec Inc. v Adobe Inc.*, 978 F.3d 1278, 1292 (Fed. Cir. 2020) (quoting *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1168 (Fed. Cir. 2019) (quoting *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016)) (emphasis added).

⁴ See also *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1315 (Fed. Cir. 2021); *Yanbin Yu v. Apple*, 1 F.4th 1040, 1043 (Fed. Cir. 2021); *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1361 (Fed. Cir. 2021); *Trading Techs. Int’l Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019); *Intell. Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1325 (Fed. Cir. 2017).

⁵ *In re: Jeffrey A. Killian*, No. 2021-2113 (Fed. Cir. Aug. 23, 2022) slip op. at 12.

⁶ *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016).

⁷ *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (“there is a critical difference between patenting a particular concrete solution to a problem and attempting to patent the abstract idea of a solution to the problem in general.”).

⁸ *In re: Jeffrey A. Killian*, slip op. at 13.

The Federal Circuit has also applied the instruction to examine “what the patent asserts to be the focus of the claimed advance over the prior art” during *Alice* step 1 in a “law of nature” case.⁹ Importantly, this articulation captures in a concise instruction the body of case law examining whether claims that recite a law of nature or natural phenomenon are “directed to” those judicial exceptions. As the cases frequently explain, “adding ‘conventional steps, specified at a high level of generality,’ to a law of nature or natural phenomenon does not make a claim to the law or phenomenon patentable.”¹⁰ Another important question discussed in some life science cases is whether the claimed advance improves upon a technological process.¹¹ These cases raise more specific versions of the inquiry into “what the patent asserts to be the focus of the claimed advance over the prior art” that will often be appropriate for life science related claims.

The Guidance Deviates from the Controlling Case Law and Merits Correction

The critical question of whether a claim is “directed to” a judicial exception under *Alice* step 1 cannot be distilled into a “practical application” test. To our knowledge, none of the cases analyzing claims that recite abstract ideas consider whether “they are integrated into a practical application.” The Guidance cites none, and this test should not remain in the Guidance when the controlling case law makes no mention of it.

Some life sciences cases examining claims that recite laws of nature and natural phenomena mention that “applications and uses of such laws *may* be patentable,”¹² but we are aware of no case that holds that every “practical application” is patent-eligible or that defines what “integrated into a practical application” means. In contrast, almost every law of nature case takes a much closer look at the claims to consider questions such as whether they add only conventional steps or recite only a goal without a solution.¹³ Moreover, we are aware of no abstract idea case that finds patent-eligibility based on integration of the abstract idea into a practical application. The Guidance’s description of eligibility is therefore overbroad.

Requiring examiners to apply such an usual and unsupported rule can only create confusion and lead to the improper issuance of patents that claim ineligible subject matter. The common understanding of a “practical application” encompasses uses and activities that the courts have ruled as ineligible, such as “practical” business methods that govern financial transactions and relationships between parties, like the mediated settlement process invalidated in *Alice*. In another common example, the Federal Circuit has held that patent claims are ineligible if they

⁹ See *American Axle & Manufacturing v. Neapco Holdings LLC*, 967 F.3d 1285, 1292 (Fed Cir. 2020) (“To determine what a claim is “directed to” at step one, we look to the “focus of the claimed advance.”).

¹⁰ *Illumina, Inc. v. Ariosa Diagnostics*, 967 F.3d 1319, 1324 (Fed. Cir. 2020) (emphasis added) (*citing Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 82 (2012)).

¹¹ *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047-49 (Fed. Cir. 2016).

¹² See *Illumina*, 967 F.3d at 1324.

¹³ See, e.g., *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1376 (Fed. Cir. 2015).

are directed to graphical user interfaces or other methods of presenting information on a computer,¹⁴ but an argument can be made that these are “practical applications” in that they seek to help a person understand or find information.

This concern is particularly salient to UFPRs’ Main Street businesses, who are engaged in the retail and service industries. These companies use the internet to conduct business transactions and to present information about their products or services to customers, so they have been regularly sued on patents that cover business methods that purport to claim a way of presenting information to a potential customer, or that cover other abstract ideas that an applicant could portray as “practical.” The Guidance as it currently stands threatens to add fuel to the fire by generating more such patents when they should have been rejected. The issuance of such ineligible patents serves no one – not patent owners, not businesses or their customers, and not the broader public.

MPEP § 2106.04(d) does not solve this problem. That section disingenuously attempts to jam the square peg of the “practical application” test into the round hole of a large body of case law that develops the “directed to” analysis of *Alice* step 1. The case law sets out a number of factors that examiners can consider to determine whether a claim is “directed to” an abstract idea, such as whether the claim covers an improvement in the functioning of a computer. But § 2106.04(d)’s attempt to equate these factors with a “practical application” analysis when the cases from which they emerge make no mention of “practical application” only creates confusion for both examiners and applicants.

How the Guidance Should be Corrected

UFPR offers redline edits as an Appendix to this letter that replace the “practical application” test in Prong 2 of Step 2A, as found in MPEP § 2106.04, with the correct, settled articulation of the “directed to” step drawn from controlling case law: “what the patent asserts to be the focus of the claimed advance over the prior art.” This approach works well for all judicial exceptions, but at the very least, the Guidance should direct that it be applied for claims reciting an abstract idea, as the Federal Circuit has repeatedly embraced it in that context. Should the PTO adopt this edit to Step 2A, conforming edits will be needed throughout the subsections and flow charts of MPEP § 2106.04, but most especially to MPEP § 2106.04(d).

The Guidance will be most beneficial to examiners and most likely to ensure that patents issued by the PTO are valid if the discussion in MPEP § 2106.04 also lists the other most common formulations from case law of the “directed to” analysis and explains that they are best understood as more specific statements of the Guidance’s Prong 2 test. These additions would

¹⁴ See, e.g., *Trading Technologies Int’l v. IBG LLC*, 921 F.3d 1084, 1092 (Fed. Cir. 2019); *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335 (Fed. Cir. 2018); *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1284 (Fed. Cir. 2018).

make Prong 2 more concrete and understandable, while helping examiners operate under the body of controlling case law for *Alice* step 1. Additions proposed in the redline are:

- Whether a claim recites an improvement in the functioning of a computer, or an improvement to other technology or technical field;
- Whether a claim recites a specific improvement, or only a desirable result or function;
- Whether a claim adds only conventional steps, specified at a high level of generality, to a judicial exception.

We thank the PTO for this opportunity to provide input on this important topic. As UFPR has explained before Congress and in prior comments to the PTO, patent eligibility limits best promote innovation and protect both the producers and consumers of products and services when they ensure that the patent system's rewards go only to those who have made an actual improvement to technology. We respectfully urge the agency to amend the Guidance to conform with case law and support this overarching goal of Section 101 of the Patent Act.

Appendix
UFPR Suggested Edits to MPEP 2106.04

2106.04 Eligibility Step 2A: Whether a Claim is Directed to a Judicial Exception [R-10.2019]

I. JUDICIAL EXCEPTIONS

Determining that a claim falls within one of the four enumerated categories of patentable subject matter recited in **35 U.S.C. 101** (i.e., process, machine, manufacture, or composition of matter) in Step 1 does not end the eligibility analysis, because claims directed to nothing more than abstract ideas (such as a mathematical formula or equation), natural phenomena, and laws of nature are not eligible for patent protection. *Diamond v. Diehr*, 450 U.S. 175, 185, 209 USPQ 1, 7 (1981). *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216, 110 USPQ2d 1976, 1980 (2014) (citing *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589, 106 USPQ2d 1972, 1979 (2013)); *Diamond v. Chakrabarty*, 447 U.S. 303, 309, 206 USPQ 193, 197 (1980); *Parker v. Flook*, 437 U.S. 584, 589, 198 USPQ 193, 197 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 67-68, 175 USPQ 673, 675 (1972). See also *Bilski v. Kappos*, 561 U.S. 593, 601, 95 USPQ2d 1001, 1005-06 (2010) ("The Court's precedents provide three specific exceptions to **§ 101's** broad patent-eligibility principles: 'laws of nature, physical phenomena, and abstract ideas'" (quoting *Chakrabarty*, 447 U.S. at 309, 206 USPQ at 197 (1980))).

In addition to the terms "laws of nature," "natural phenomena," and "abstract ideas," judicially recognized exceptions have been described using various other terms, including "physical phenomena," "products of nature," "scientific principles," "systems that depend on human intelligence alone," "disembodied concepts," "mental processes," and "disembodied mathematical algorithms and formulas." It should be noted that there are no bright lines between the types of exceptions, and that many of the concepts identified by the courts as exceptions can fall under several exceptions. For example, mathematical formulas are considered to be a judicial exception as they express a scientific truth, but have been labelled by the courts as both abstract ideas and laws of nature. Likewise, "products of nature" are considered to be an exception because they tie up the use of naturally occurring

things, but have been labelled as both laws of nature and natural phenomena. Thus, it is sufficient for this analysis for the examiner to identify that the claimed concept (the specific claim limitation(s) that the examiner believes may recite an exception) aligns with at least one judicial exception.

The Supreme Court has explained that the judicial exceptions reflect the Court's view that abstract ideas, laws of nature, and natural phenomena are "the basic tools of scientific and technological work", and are thus excluded from patentability because "monopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it." *Alice Corp.*, 573 U.S. at 216, 110 USPQ2d at 1980 (quoting *Myriad*, 569 U.S. at 589, 106 USPQ2d at 1978 and *Mayo Collaborative Servs. v. Prometheus Labs. Inc.*, 566 U.S. 66, 71, 101 USPQ2d 1961, 1965 (2012)). The Supreme Court's concern that drives this "exclusionary principle" is pre-emption. *Alice Corp.*, 573 U.S. at 216, 110 USPQ2d at 1980. The Court has held that a claim may not preempt abstract ideas, laws of nature, or natural phenomena, even if the judicial exception is narrow (e.g., a particular mathematical formula such as the Arrhenius equation). See, e.g., *Mayo*, 566 U.S. at 79-80, 86-87, 101 USPQ2d at 1968-69, 1971 (claims directed to "narrow laws that may have limited applications" held ineligible); *Flook*, 437 U.S. at 589-90, 198 USPQ at 197 (claims that did not "wholly preempt the mathematical formula" held ineligible). This is because such a patent would "in practical effect [] be a patent on the [abstract idea, law of nature or natural phenomenon] itself." *Benson*, 409 U.S. at 71- 72, 175 USPQ at 676. The concern over preemption was expressed as early as 1852. See *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.").

While preemption is the concern underlying the judicial exceptions, it is not a standalone test for determining eligibility. *Rapid Litig. Mgmt. v. CellzDirect, Inc.*, 827 F.3d 1042, 1052, 119 USPQ2d 1370, 1376 (Fed. Cir. 2016). Instead, questions of preemption are inherent in and resolved by the two-part framework from *Alice Corp. and Mayo* (the *Alice/Mayo* test referred to by the Office as Steps 2A and 2B). *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1150, 120 USPQ2d 1473, 1483 (Fed. Cir. 2016); *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379, 115 USPQ2d 1152, 1158 (Fed. Cir. 2015). It is necessary to evaluate

eligibility using the *Alice/Mayo* test, because while a preemptive claim may be ineligible, the absence of complete preemption does not demonstrate that a claim is eligible. *Diamond v. Diehr*, 450 U.S. 175, 191-92 n.14, 209 USPQ 1, 10-11 n.14 (1981) ("We rejected in *Flook* the argument that because all possible uses of the mathematical formula were not pre-empted, the claim should be eligible for patent protection"). See also *Synopsys v. Mentor Graphics*, 839 F.3d at 1150, 120 USPQ2d at 1483; *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098, 120 USPQ2d 1293, 1299 (Fed. Cir. 2016); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1320-21, 120 USPQ2d 1353, 1362 (Fed. Cir. 2016); *Sequenom*, 788 F.3d at 1379, 115 USPQ2d at 1158. Several Federal Circuit decisions, however, have noted the absence of preemption when finding claims eligible under the *Alice/Mayo* test. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1315, 120 USPQ2d 1091, 1102-03 (Fed. Cir. 2016); *Rapid Litig. Mgmt. v. CellzDirect, Inc.*, 827 F.3d 1042, 1052, 119 USPQ2d 1370, 1376 (Fed. Cir. 2016); *BASCOM Global Internet v. AT&T Mobility, LLC*, 827 F.3d 1341, 1350-52, 119 USPQ2d 1236, 1243-44 (Fed. Cir. 2016).

The Supreme Court's decisions make it clear that judicial exceptions need not be old or long-prevalent, and that even newly discovered or novel judicial exceptions are still exceptions. For example, the mathematical formula in *Flook*, the laws of nature in *Mayo*, and the isolated DNA in *Myriad* were all novel or newly discovered, but nonetheless were considered by the Supreme Court to be judicial exceptions because they were "'basic tools of scientific and technological work' that lie beyond the domain of patent protection." *Myriad*, 569 U.S. 576, 589, 106 USPQ2d at 1976, 1978 (noting that *Myriad* discovered the BRCA1 and BRCA1 genes and quoting *Mayo*, 566 U.S. 71, 101 USPQ2d at 1965); *Flook*, 437 U.S. at 591-92, 198 USPQ2d at 198 ("the novelty of the mathematical algorithm is not a determining factor at all"); *Mayo*, 566 U.S. 73-74, 78, 101 USPQ2d 1966, 1968 (noting that the claims embody the researcher's discoveries of laws of nature). The Supreme Court's cited rationale for considering even "just discovered" judicial exceptions as exceptions stems from the concern that "without this exception, there would be considerable danger that the grant of patents would 'tie up' the use of such tools and thereby 'inhibit future innovation premised upon them.'" *Myriad*, 569 U.S. at 589, 106 USPQ2d at 1978-79 (quoting *Mayo*, 566 U.S. at 86, 101 USPQ2d at 1971). See also *Myriad*, 569 U.S. at 591, 106 USPQ2d at 1979 ("Groundbreaking, innovative, or

even brilliant discovery does not by itself satisfy the [§101](#) inquiry."). The Federal Circuit has also applied this principle, for example, when holding a concept of using advertising as an exchange or currency to be an abstract idea, despite the patentee's arguments that the concept was "new". *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714-15, 112 USPQ2d 1750, 1753-54 (Fed. Cir. 2014). *Cf. Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151, 120 USPQ2d 1473, 1483 (Fed. Cir. 2016) ("a **new** abstract idea is still an abstract idea") (emphasis in original).

For a detailed discussion of abstract ideas, see [MPEP § 2106.04\(a\)](#); for a detailed discussion of laws of nature, natural phenomena and products of nature, see [MPEP § 2106.04\(b\)](#).

II. ELIGIBILITY STEP 2A: WHETHER A CLAIM IS DIRECTED TO A JUDICIAL EXCEPTION

As described in [MPEP § 2106](#), subsection III, Step 2A of the Office's eligibility analysis is the first part of the *Alice/Mayo* test, *i.e.*, the Supreme Court's "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217-18, 110 USPQ2d 1976, 1981 (2014) (citing *Mayo*, 566 U.S. at 77-78, 101 USPQ2d at 1967-68). Like the other steps in the eligibility analysis, evaluation of this step should be made after determining what applicant has invented by reviewing the entire application disclosure and construing the claims in accordance with their broadest reasonable interpretation. See [MPEP § 2106](#), subsection II for more information about the importance of understanding what the applicant has invented, and [MPEP § 2111](#) for more information about the broadest reasonable interpretation.

Step 2A asks: Is the claim directed to a law of nature, a natural phenomenon (product of nature) or an abstract idea? In the context of the flowchart in [MPEP § 2106](#), subsection III, Step 2A determines whether:

- The claim as a whole is not directed to a judicial exception (Step 2A: NO) and thus is eligible at Pathway B, thereby concluding the eligibility analysis; or

- The claim as a whole is directed to a judicial exception (Step 2A: YES) and thus requires further analysis at Step 2B to determine if the claim as a whole amounts to significantly more than the exception itself.

A.Step 2A Is a Two Prong Inquiry

Step 2A is a two-prong inquiry, in which examiners determine in Prong One whether a claim recites, *sets forth*, or *describes* a judicial exception, and if so, then determine in Prong Two *what the patent asserts to be the focus of the claimed advance over the prior art and whether that focus constitutes eligible subject matter*~~if the recited judicial exception is integrated into a practical application of that exception~~. Together, these prongs represent the first part of the *Alice/Mayo* test, which determines whether a claim is directed to a judicial exception.

The flowchart below depicts the two-prong analysis that is performed in order to answer the Step 2A inquiry.

[FLOW CHART]

1. Prong One

Prong One asks does the claim recite an abstract idea, law of nature, or natural phenomenon? In Prong One examiners evaluate whether the claim recites a judicial exception, i.e. whether a law of nature, natural phenomenon, or abstract idea is **set forth** or **described** in the claim. While the terms "set forth" and "described" are thus both equated with "recite", their different language is intended to indicate that there are two ways in which an exception can be recited in a claim. For instance, the claims in *Diehr*, 450 U.S. at 178 n. 2, 179 n.5, 191-92, 209 USPQ at 4-5 (1981), clearly stated a mathematical equation in the repetitively calculating step, and the claims in *Mayo*, 566 U.S. 66, 75-77, 101 USPQ2d 1961, 1967-68 (2012), clearly stated laws of nature in the wherein clause, such that the claims "set forth" an identifiable judicial exception. Alternatively, the claims in *Alice Corp.*, 573 U.S. at 218, 110 USPQ2d at 1982, described the concept of intermediated settlement without ever explicitly using the words "intermediated" or "settlement."

The Supreme Court has held that Section 101 contains an implicit exception for "[l]aws of nature, natural phenomena, and abstract ideas," which are "the basic tools of scientific and technological work." *Alice Corp.*, 573 U.S. at 216, 110

USPQ2d at 1980 (citing *Mayo*, 566 US at 71, 101 USPQ2d at 1965). Yet, the Court has explained that “[a]t some level, all inventions embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,” and has cautioned “to tread carefully in construing this exclusionary principle lest it swallow all of patent law.” *Id.* See also *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335, 118 USPQ2d 1684, 1688 (Fed. Cir. 2016) (“The ‘directed to’ inquiry, therefore, cannot simply ask whether the claims involve a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions involves a law of nature and/or natural phenomenon”). Examiners should accordingly be careful to distinguish claims that **recite** an exception (which require further eligibility analysis) and claims that merely **involve** an exception (which are eligible and do not require further eligibility analysis).

An example of a claim that recites a judicial exception is "A machine comprising elements that operate in accordance with $F=ma$." This claim sets forth the principle that force equals mass times acceleration ($F=ma$) and therefore recites a law of nature exception. Because $F=ma$ represents a mathematical formula, the claim could alternatively be considered as reciting an abstract idea. Because this claim recites a judicial exception, it requires further analysis in Prong Two in order to answer the Step 2A inquiry. An example of a claim that merely involves, or is based on, an exception is a claim to "A teeter-totter comprising an elongated member pivotably attached to a base member, having seats and handles attached at opposing sides of the elongated member." This claim is based on the concept of a lever pivoting on a fulcrum, which involves the natural principles of mechanical advantage and the law of the lever. However, this claim does not recite these natural principles and therefore is not directed to a judicial exception (Step 2A: NO). Thus, the claim is eligible at Pathway B without further analysis.

If the claim recites a judicial exception (*i.e.*, an abstract idea enumerated in [MPEP § 2106.04\(a\)](#), a law of nature, or a natural phenomenon), the claim requires further analysis in Prong Two. If the claim does not recite a judicial exception (a law of nature, natural phenomenon, or abstract idea), then the claim cannot be directed to a judicial exception (Step 2A: NO), and thus the claim is eligible at Pathway B without further analysis.

For more information how to determine if a claim recites an abstract idea, see [MPEP § 2106.04\(a\)](#). For more information on how to determine if a claim recites a law of nature or natural phenomenon, see [MPEP § 2106.04\(b\)](#). For more information on how to determine if a claim recites a product of nature, see [MPEP § 2106.04\(c\)](#).

2. Prong Two

~~Prong Two asks does the claim recite additional elements that integrate the judicial exception into a practical application? In Prong Two, examiners evaluate whether the claim as a whole integrates the exception into a practical application of that exception. If the additional elements in the claim integrate the recited exception into a practical application of the exception, then the claim is not directed to the judicial exception (Step 2A: NO) and thus is eligible at Pathway B. This concludes the eligibility analysis. If, however, the additional elements do not integrate the exception into a practical application, then the claim is directed to the recited judicial exception (Step 2A: YES), and requires further analysis under Step 2B (where it may still be eligible if it amounts to an "inventive concept"). For more information on how to evaluate whether a judicial exception is integrated into a practical application, see [MPEP § 2106.04\(d\)\(2\)](#).~~

The mere inclusion of a judicial exception such as a mathematical formula (which is one of the mathematical concepts identified as an abstract idea in [MPEP § 2106.04\(a\)](#)) in a claim means that the claim "recites" a judicial exception under Step 2A Prong One. However, mere recitation of a judicial exception does not mean that the claim is "directed to" that judicial exception under Step 2A Prong Two. Instead, under Prong Two, ~~when a claim that recites a judicial exception an examiner must identify what the patent asserts to be the focus of the claimed advance over the prior art and whether that focus constitutes eligible subject matter or merely the judicial exception is not directed to that judicial exception, if the claim as a whole integrates the recited judicial exception into a practical application of that exception.~~ Prong Two thus distinguishes claims that are "directed to" the recited judicial exception from claims that are not "directed to" the recited judicial exception.

Depending on the subject matter of a claim and the particular judicial exception recited, other more specific formulations of Prong Two may be useful for

determining whether a claim is “directed to” a judicial exception. These formulations also serve to identify what the patent asserts to be the focus of the claimed advance over the prior art. They include:

- Whether a claim recites an improvement in the functioning of a computer, or an improvement to other technology or technical field;
- Whether a claim recites a specific improvement, or only a desirable result or function;
- Whether a claim adds only conventional steps, specified at a high level of generality, to a judicial exception.

For more information on how to evaluate the focus of the claimed advance over the prior art and whether that focus constitutes eligible subject matter, see **MPEP § 2106.04(d)**.

If the focus of the claimed advance over the prior art constitutes eligible subject matter, then the claim is not directed to the judicial exception (Step 2A: NO) and thus is eligible at Pathway B. This concludes the eligibility analysis. If, however, the focus of the claimed advance over the prior art does not constitute eligible subject matter, then the claim is directed to the recited judicial exception (Step 2A: YES), and requires further analysis under Step 2B (where it may still be eligible if it amounts to an “inventive concept”).

Because a judicial exception is not eligible subject matter, *Bilski*, 561 U.S. at 601, 95 USPQ2d at 1005-06 (quoting *Chakrabarty*, 447 U.S. at 309, 206 USPQ at 197 (1980)), if there are no additional claim elements besides the judicial exception, or if the additional claim elements merely recite another judicial exception, that is insufficient to ~~establish eligible subject matter—integrate the judicial exception into a practical application~~. See, e.g., *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327, 122 USPQ2d 1377 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea (encoding and decoding) does not render the claim non-abstract”); *Genetic Techs. v. Merial LLC*, 818 F.3d 1369, 1376, 118 USPQ2d 1541, 1546 (Fed. Cir. 2016) (eligibility “cannot be furnished by the unpatentable law of nature (or natural phenomenon or abstract idea) itself.”). For a claim reciting a judicial exception to be eligible, the additional elements (if any) in the claim must “transform the nature of the claim” such that what the patent asserts to be the focus of the claimed advance over the prior art constitutes eligible subject

~~matter into a patent-eligible application of the judicial exception~~, *Alice Corp.*, 573 U.S. at 217, 110 USPQ2d at 1981, either at Prong Two or in Step 2B. If there are no additional elements in the claim, then it cannot be eligible. In such a case, after making the appropriate rejection (see [MPEP § 2106.07](#) for more information on formulating a rejection for lack of eligibility), it is a best practice for the examiner to recommend an amendment, if possible, that would resolve eligibility of the claim.

B. Evaluating Claims Reciting Multiple Judicial Exceptions

A claim may recite multiple judicial exceptions. For example, claim 4 at issue in *Bilski v. Kappos*, 561 U.S. 593, 95 USPQ2d 1001 (2010) recited two abstract ideas, and the claims at issue in *Mayo Collaborative Servs. v. Prometheus Labs. Inc.*, 566 U.S. 66, 101 USPQ2d 1961 (2012) recited two laws of nature. However, these claims were analyzed by the Supreme Court in the same manner as claims reciting a single judicial exception, such as those in *Alice Corp.*, 573 U.S. 208, 110 USPQ2d 1976.

During examination, examiners should apply the same eligibility analysis to all claims regardless of the number of exceptions recited therein. Unless it is clear that a claim recites distinct exceptions, such as a law of nature and an abstract idea, care should be taken not to parse the claim into multiple exceptions, particularly in claims involving abstract ideas. Accordingly, if possible examiners should treat the claim for Prong Two and Step 2B purposes as containing a single judicial exception.

In some claims, the multiple exceptions are distinct from each other, *e.g.*, a first limitation describes a law of nature, and a second limitation elsewhere in the claim recites an abstract idea. In these cases, for purposes of examination efficiency, examiners should select one of the exceptions and conduct the eligibility analysis for that selected exception. If the analysis indicates that the claim recites an additional element or combination of elements ~~such that what the patent asserts to be the focus of the claimed advance over the prior art constitutes eligible subject matter~~~~integrate the selected exception into a practical application~~ or that amount to significantly more than the selected exception, then the claim should be considered patent eligible. On the other hand, if the claim does not recite any additional element or combination of elements ~~such that what the patent asserts to be the focus of the claimed advance over the prior art constitutes eligible subject matter~~~~integrate the selected exception into a practical application~~, and also does

not recite any additional element or combination of elements that amounts to significantly more than the selected exception, then the claim should be considered ineligible. *University of Utah Research Foundation v. Ambry Genetics*, 774 F.3d 755, 762, 113 USPQ2d 1241, 1246 (Fed. Cir. 2014) (because claims did not amount to significantly more than the recited abstract idea, court "need not decide" if claims also recited a law of nature).

In other claims, multiple abstract ideas, which may fall in the same or different groupings, or multiple laws of nature may be recited. In these cases, examiners should not parse the claim. For example, in a claim that includes a series of steps that recite mental steps as well as a mathematical calculation, an examiner should identify the claim as reciting both a mental process and a mathematical concept for Step 2A Prong One to make the analysis clear on the record. However, if possible, the examiner should consider the limitations together as a single abstract idea for Step 2A Prong Two and Step 2B (if necessary) rather than as a plurality of separate abstract ideas to be analyzed individually.