

Manual of Patent Examining Procedure (MPEP) Ninth Edition, Revision 10.2019, Last Revised June 2020

2106: Patent Subject Matter Eligibility

I. TWO CRITERIA FOR SUBJECT MATTER ELIGIBILITY

First, the claimed invention must be to one of the four statutory categories. [35 U.S.C. 101](#) defines the four categories of invention that Congress deemed to be the appropriate subject matter of a patent: processes, machines, manufactures and compositions of matter. The latter three categories define "things" or "products" while the first category defines "actions" (i.e., inventions that consist of a series of steps or acts to be performed). See [35 U.S.C. 100\(b\)](#) ("The term 'process' means process, art, or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material."). See [MPEP § 2106.03](#) for detailed information on the four categories.

Second, the claimed invention also must qualify as patent-eligible subject matter, i.e., the claim must not be directed to a judicial exception unless the claim as a whole includes additional limitations amounting to significantly more than the exception. The judicial exceptions (also called "judicially recognized exceptions" or simply "exceptions") are subject matter that the courts have found to be outside of, or exceptions to, the four statutory categories of invention, and are limited to abstract ideas, laws of nature and natural phenomena (including products of nature). *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216, 110 USPQ2d 1976, 1980 (2014) (citing *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589, 106 USPQ2d 1972, 1979 (2013)). See [MPEP § 2106.04](#) for detailed information on the judicial exceptions.

Because abstract ideas, laws of nature, and natural phenomenon "are the basic tools of scientific and technological work", the Supreme Court has expressed concern that monopolizing these tools by granting patent rights may impede innovation rather than promote it. See *Alice Corp.*, 573 U.S. at 216, 110 USPQ2d at 1980; *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71, 101 USPQ2d 1961, 1965 (2012). However, the Court has also emphasized that an invention is not considered to be ineligible for patenting simply because it involves a judicial exception. *Alice Corp.*, 573 U.S. at 217, 110 USPQ2d at 1980-81 (citing *Diamond v. Diehr*, 450 U.S. 175, 187, 209 USPQ 1, 8 (1981)). See also *Thales Visionix Inc. v. United States*, 850 F.3d. 1343, 1349, 121 USPQ2d 1898, 1902 (Fed. Cir. 2017) ("That a mathematical equation is required to complete the claimed method and system does not doom the claims to abstraction."). Accordingly, the Court has said that integration of an abstract idea, law of nature or natural phenomenon into a practical application may be eligible for patent protection. See, e.g., *Alice*, 573 U.S. at 217, 110 USPQ2d at 1981 (explaining that "in applying the [§101](#) exception, we must distinguish between patents that claim the 'buildin[g] block[s]' of human ingenuity and those that integrate the building blocks into something more" (quoting *Mayo*, 566 U.S. at 89, 110 USPQ2d at 1971) and stating that *Mayo* "set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts"); *Mayo*, 566 U.S. at 80, 84, 101 USPQ2d at 1969, 1971 (noting that the Court in *Diamond v. Diehr* found "the overall process patent eligible because of the way the additional steps of the process integrated the

equation into the process as a whole," but the Court in *Gottschalk v. Benson* "held that simply implementing a mathematical principle on a physical machine, namely a computer, was not a patentable application of that principle"); *Bilski v. Kappos*, 561 U.S. 593, 611, 95 USPQ2d 1001, 1010 (2010) ("*Diehr* explained that while an abstract idea, law of nature, or mathematical formula could not be patented, 'an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.'" (quoting *Diamond v. Diehr*, 450 U.S. 175, 187, 209 USPQ 1, 8 (1981)) (emphasis in original)); *Diehr*, 450 U.S. at 187, 192 n.14, 209 USPQ at 10 n.14 (explaining that the process in *Parker v. Flook* was ineligible not because it contained a mathematical formula, but because it did not provide an application of the formula). See *Diamond v. Diehr*, 450 U.S. 175, 209 USPQ 1 (1981); *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ 673 (1972); *Parker v. Flook*, 437 U.S. 584, 198 USPQ 193 (1978).

The Supreme Court in *Mayo* laid out a framework for determining whether an applicant is seeking to patent a judicial exception itself, or a patent-eligible application of the judicial exception. See *Alice Corp.*, 573 U.S. at 217-18, 110 USPQ2d at 1981 (citing *Mayo*, 566 U.S. 66, 101 USPQ2d 1961). This framework, which is referred to as the *Mayo* test or the *Alice/Mayo* test, is discussed in further detail in subsection III, below. The first part of the *Mayo* test is to determine whether the claims are directed to an abstract idea, a law of nature or a natural phenomenon (i.e., a judicial exception). *Id.* If the claims are directed to a judicial exception, the second part of the *Mayo* test is to determine whether the claim recites additional elements that amount to significantly more than the judicial exception. *Id.* citing *Mayo*, 566 U.S. at 72-73, 101 USPQ2d at 1966). The Supreme Court has described the second part of the test as the "search for an 'inventive concept'". *Alice Corp.*, 573 U.S. at 217-18, 110 USPQ2d at 1981 (citing *Mayo*, 566 U.S. at 72-73, 101 USPQ2d at 1966).

The *Alice/Mayo* two-part test is the only test that should be used to evaluate the eligibility of claims under examination. While the machine-or-transformation test is an important clue to eligibility, it should not be used as a separate test for eligibility. Instead it should be considered as part of the "integration" determination or "significantly more" determination articulated in the *Alice/Mayo* test. *Bilski v. Kappos*, 561 U.S. 593, 605, 95 USPQ2d 1001, 1007 (2010). See [MPEP § 2106.04\(d\)](#) for more information about evaluating whether a claim reciting a judicial exception is integrated into a practical application and [MPEP § 2106.05\(b\)](#) and [MPEP § 2106.05\(c\)](#) for more information about how the machine-or-transformation test fits into the *Alice/Mayo* two-part framework. Likewise, eligibility should not be evaluated based on whether the claim recites a "useful, concrete, and tangible result," *State Street Bank*, 149 F.3d 1368, 1374, 47 USPQ2d 1596, 1602 (Fed. Cir. 1998) (quoting *In re Alappat*, 33 F.3d 1526, 1544, 31 USPQ2d 1545, 1557 (Fed. Cir. 1994)), as this test has been superseded. *In re Bilski*, 545 F.3d 943, 959-60, 88 USPQ2d 1385, 1394-95 (Fed. Cir. 2008) (*en banc*), *aff'd* by *Bilski v. Kappos*, 561 U.S. 593, 95 USPQ2d 1001 (2010). See also *TLI Communications LLC v. AV Automotive LLC*, 823 F.3d 607, 613, 118 USPQ2d 1744, 1748 (Fed. Cir. 2016) ("It is well-settled that mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea"). The programmed computer or "special purpose computer" test of *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994) (*i.e.*, the rationale that an otherwise ineligible algorithm or software could be made patent-eligible by merely adding a generic computer to the claim for the "special purpose" of executing the algorithm or software) was also superseded by the Supreme Court's *Bilski* and *Alice Corp.* decisions. *Eon Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 623, 114 USPQ2d 1711, 1715 (Fed. Cir. 2015) ("[W]e note that *Alappat* has been

superseded by *Bilski*, 561 U.S. at 605–06, and *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 110 USPQ2d 1976 (2014)"); *Intellectual Ventures I LLC v. Capital One Bank (USA), N.A.*, 792 F.3d 1363, 1366, 115 USPQ2d 1636, 1639 (Fed. Cir. 2015) ("An abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment, such as the Internet [or] a computer"). Lastly, eligibility should not be evaluated based on whether the claimed invention has utility, because "[u]tility is not the test for patent-eligible subject matter." *Genetic Techs. Ltd. v. Merial LLC*, 818 F.3d 1369, 1380, 118 USPQ2d 1541, 1548 (Fed. Cir. 2016).

Examiners are reminded that [35 U.S.C. 101](#) is not the sole tool for determining patentability; [35 U.S.C. 112](#), [35 U.S.C. 102](#), and [35 U.S.C. 103](#) will provide additional tools for ensuring that the claim meets the conditions for patentability. As the Supreme Court made clear in *Bilski*, 561 U.S. at 602, 95 USPQ2d at 1006:

The [§ 101](#) patent-eligibility inquiry is only a threshold test. Even if an invention qualifies as a process, machine, manufacture, or composition of matter, in order to receive the Patent Act’s protection the claimed invention must also satisfy “the conditions and requirements of this title.” [§ 101](#). Those requirements include that the invention be novel, see [§ 102](#), nonobvious, see [§ 103](#), and fully and particularly described, see [§ 112](#).

II. ESTABLISH BROADEST REASONABLE INTERPRETATION OF CLAIM AS A WHOLE

It is essential that the broadest reasonable interpretation (BRI) of the claim be established prior to examining a claim for eligibility. The BRI sets the boundaries of the coverage sought by the claim and will influence whether the claim seeks to cover subject matter that is beyond the four statutory categories or encompasses subject matter that falls within the exceptions. See *MyMail, Ltd. v. ooVoo, LLC*, 934 F.3d 1373, 1379, 2019 USPQ2d 305789 (Fed. Cir. 2019) ("Determining patent eligibility requires a full understanding of the basic character of the claimed subject matter"), citing *Bancorp Servs., LLC v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1273-74, 103 USPQ2d 1425, 1430 (Fed. Cir. 2012); *In re Bilski*, 545 F.3d 943, 951, 88 USPQ2d 1385, 1388 (Fed. Cir. 2008) (*en banc*), *aff’d by Bilski v. Kappos*, 561 U.S. 593, 95 USPQ2d 1001 (2010) ("claim construction ... is an important first step in a [§ 101](#) analysis"). Evaluating eligibility based on the BRI also ensures that patent eligibility under [35 U.S.C. 101](#) does not depend simply on the draftsman’s art. *Alice*, 573 U.S. 208, 224, 110 USPQ2d at 1984, 1985 (citing *Parker v. Flook*, 437 U.S. 584, 593, 198 USPQ 193, 198 (1978) and *Mayo*, 566 U.S. at 72, 101 USPQ2d at 1966). See [MPEP § 2111](#) for more information about determining the BRI.

Claim interpretation affects the evaluation of both criteria for eligibility. For example, in *Mentor Graphics v. EVE-USA, Inc.*, 851 F.3d 1275, 112 USPQ2d 1120 (Fed. Cir. 2017), claim interpretation was crucial to the court’s determination that claims to a "machine-readable medium" were not to a statutory category. In *Mentor Graphics*, the court interpreted the claims in light of the specification, which expressly defined the medium as encompassing "any data storage device" including random-access memory and carrier waves. Although random-access memory and magnetic tape are statutory media, carrier waves are not because they are signals similar to the

transitory, propagating signals held to be non-statutory in *Nuijten*. 851 F.3d at 1294, 112 USPQ2d at 1133 (citing *In re Nuijten*, 500 F.3d 1346, 84 USPQ2d 1495 (Fed. Cir. 2007)). Accordingly, because the BRI of the claims covered both subject matter that falls within a statutory category (the random-access memory), as well as subject matter that does not (the carrier waves), the claims as a whole were not to a statutory category and thus failed the first criterion for eligibility.

With regard to the second criterion for eligibility, the *Alice/Mayo* test, claim interpretation can affect the first part of the test (whether the claims are directed to a judicial exception). For example, the patentee in *Synopsys* argued that the claimed methods of logic circuit design were intended to be used in conjunction with computer-based design tools, and were thus not mental processes. *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1147-49, 120 USPQ2d 1473, 1480-81 (Fed. Cir. 2016). The court disagreed, because it interpreted the claims as encompassing nothing other than pure mental steps (and thus falling within an abstract idea grouping) because the claims did not include any limitations requiring computer implementation. In contrast, the patentee in *Enfish* argued that its claimed self-referential table for a computer database was an improvement in an existing technology and thus not directed to an abstract idea. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336-37, 118 USPQ2d 1684, 1689-90 (Fed. Cir. 2016). The court agreed with the patentee, based on its interpretation of the claimed "means for configuring" under [35 U.S.C. 112\(f\)](#) as requiring a four-step algorithm that achieved the improvements, as opposed to merely any form of storing tabular data. See also *McRO, Inc. v. Bandai Namco Games America, Inc.* 837 F.3d 1299, 1314, 120 USPQ2d 1091, 1102 (Fed. Cir. 2016) (the claim's construction incorporated rules of a particular type that improved an existing technological process). Claim interpretation can also affect the second part of the *Alice/Mayo* test (whether the claim recites additional elements that amount to significantly more than the judicial exception). For example, in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, where the court relied on the construction of the term "enhance" (to require application of a number of field enhancements in a distributed fashion) to determine that the claim entails an unconventional technical solution to a technological problem. 841 F.3d 1288, 1300-01, 120 USPQ2d 1527, 1537 (Fed. Cir. 2016).

III. SUMMARY OF ANALYSIS AND FLOWCHART

Examiners should determine whether a claim satisfies the criteria for subject matter eligibility by evaluating the claim in accordance with the following flowchart. The flowchart illustrates the steps of the subject matter eligibility analysis for products and processes that are to be used during examination for evaluating whether a claim is drawn to patent-eligible subject matter. It is recognized that under the controlling legal precedent there may be variations in the precise contours of the analysis for subject matter eligibility that will still achieve the same end result. The analysis set forth herein promotes examination efficiency and consistency across all technologies.

As shown in the flowchart, Step 1 relates to the statutory categories and ensures that the first criterion is met by confirming that the claim falls within one of the four statutory categories of invention. See [MPEP § 2106.03](#) for more information on Step 1. Step 2, which is the Supreme Court's *Alice/Mayo* test, is a two-part test to identify claims that are directed to a judicial exception (Step 2A) and to then evaluate if additional elements of the claim provide an inventive concept

(Step 2B) (also called "significantly more" than the recited judicial exception). See [MPEP § 2106.04](#) for more information on Step 2A and [MPEP § 2106.05](#) for more information on Step 2B.

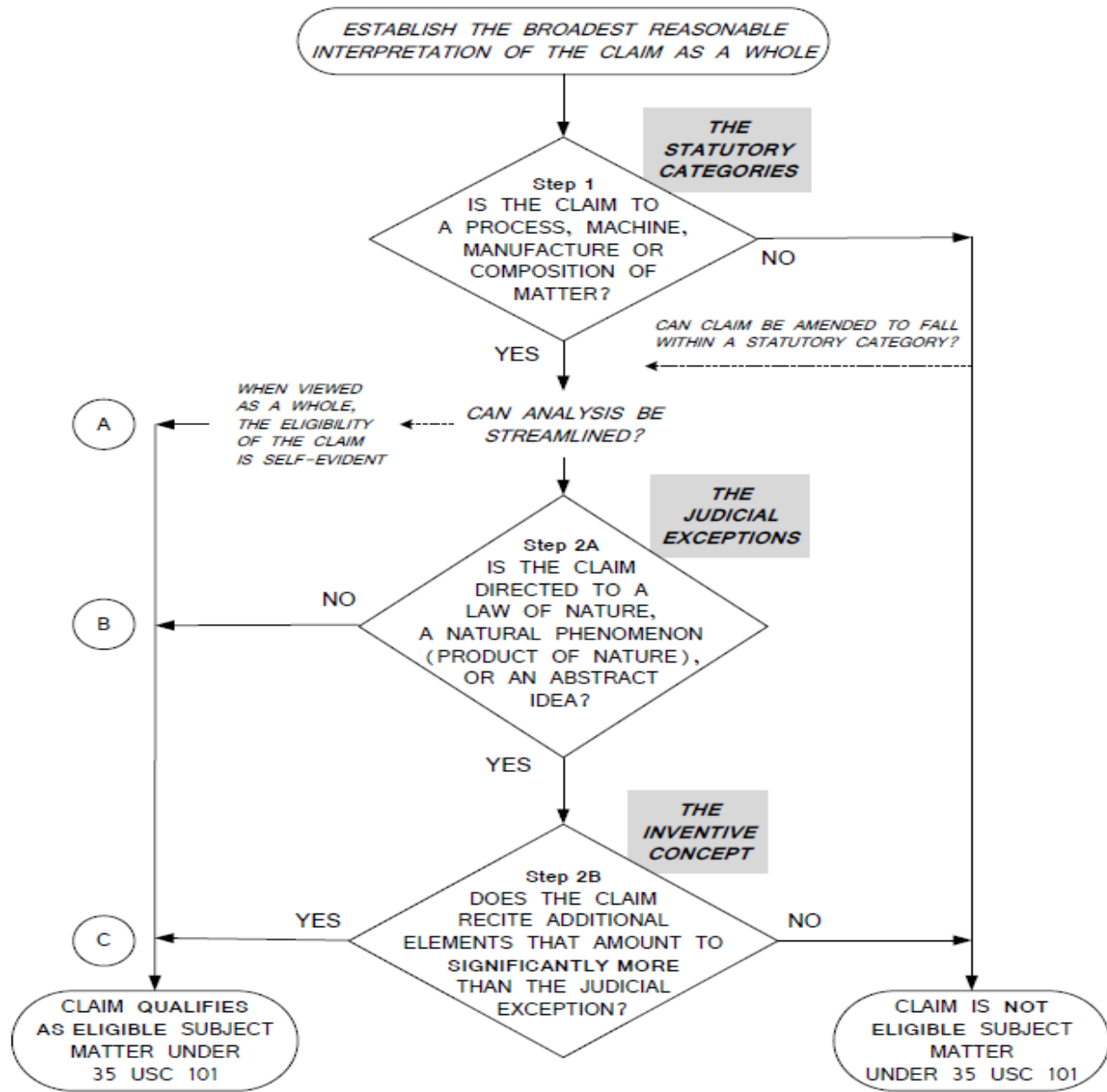
The flowchart also shows three pathways (A, B, and C) to eligibility:

- Pathway A: Claims taken as a whole that fall within a statutory category (Step 1: YES) and, which may or may not recite a judicial exception, but whose eligibility is self-evident can be found eligible at Pathway A using a streamlined analysis. See [MPEP § 2106.06](#) for more information on this pathway and on self-evident eligibility.
- Pathway B: Claims taken as a whole that fall within a statutory category (Step 1: YES) and are not directed to a judicial exception (Step 2A: NO) are eligible at Pathway B. These claims do not need to go to Step 2B. See [MPEP § 2106.04](#) for more information about this pathway and Step 2A.
- Pathway C: Claims taken as a whole that fall within a statutory category (Step 1: YES), are directed to a judicial exception (Step 2A: YES), and recite additional elements either individually or in an ordered combination that amount to significantly more than the judicial exception (Step 2B: YES) are eligible at Pathway C. See [MPEP § 2106.05](#) for more information about this pathway and Step 2B.

Claims that could have been found eligible at Pathway A (streamlined analysis), but are subjected to further analysis at Steps 2A or Step 2B, will ultimately be found eligible at Pathways B or C. Thus, if the examiner is uncertain about whether a streamlined analysis is appropriate, the examiner is encouraged to conduct a full eligibility analysis. However, if the claim is not found eligible at any of Pathways A, B or C, the claim is patent ineligible and should be rejected under [35 U.S.C. 101](#).

Regardless of whether a rejection under [35 U.S.C. 101](#) is made, a complete examination should be made for every claim under each of the other patentability requirements: [35 U.S.C. 102](#), [103](#), [112](#), and [101](#) (utility, inventorship and double patenting) and non-statutory double patenting. [MPEP § 2103](#).

SUBJECT MATTER ELIGIBILITY TEST FOR PRODUCTS AND PROCESSES



A B C → THE PATHWAYS TO ELIGIBILITY