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Alice at Six: Patent Eligibility Comes of Age

MARK A. PERRY & JAYSEN S. CHUNG*

INTRODUCTION

Patent law seeks to promote innovation by guaranteeing inventors a limited monopoly on the creation and use of their inventions. But patent law must walk a fine line in pursuit of this objective. Underprotection risks stifling progress by depriving inventors of adequate rewards and incentives for innovation. Overprotection also risks stifling progress by precluding competition and discouraging future innovators.

The Supreme Court has consistently construed 35 U.S.C. § 101 as an important tool to maintain the delicate balance between affording too much or too little protection to inventions through the patent system. That statute provides that any “new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof” is patent-eligible.¹ Excluded from the broad scope of patent-eligible subject matter are natural phenomena, laws of nature, and abstract ideas that should be “free to all men and reserved exclusively to none.”²

Naturally occurring products, such as genetic sequences, and natural laws, like Einstein’s famous equation $E = mc^2$, are not patent-eligible under Section 101.³ This is not because such things are obvious or lack novelty—on the contrary, they can be extremely difficult and costly to discover for the first time—but because they are “too important to allow a

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1. 35 U.S.C. § 101.
2. *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948).
3. *See Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 576 (2013); *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

patent holder to appropriate for exclusive use.”⁴ For the same reason, abstract ideas alone are also not patent-eligible.⁵ Otherwise, concepts and theories could be removed from public discourse.⁶

Although simple in conception, the distinction between the three categories of patent-ineligible subject matter and patent-eligible inventions can be difficult to apply in practice. Two important Supreme Court decisions of the last decade, which articulated a two-step framework for patent eligibility, highlight both the difficulty in the exercise and the straightforward manner in which the Court has approached it.⁷

In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, the patent claims at issue recited a “method of optimizing therapeutic efficacy for treatment of a . . . gastrointestinal disorder” using a thiopurine drug.⁸ The Federal Circuit held that the claims were patent-eligible under Section 101, but the Supreme Court reversed.⁹ Writing for a unanimous Court, Justice Breyer indicated that courts should consider (1) whether the patent claims are directed to an ineligible concept, such as an abstract idea, law of nature, or natural phenomenon; and (2) if so, whether the claims contain an inventive concept that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.”¹⁰

At Step One, the *Mayo* Court held that the claims were directed to the natural law that “concentrations of certain metabolites in the blood” are correlated with “the likelihood that a dosage of a thiopurine drug will prove ineffective or cause harm.”¹¹ At Step Two, the Court held that the claims lacked an inventive concept because they “simply state[d] the law of nature while adding the words ‘apply it,’” using nothing more than “well-understood, routine, conventional” techniques.¹² The Court also advanced concerns about overprotection because “upholding the patents would risk

4. Rebecca Eisenberg, *Symposium: Business Methods as “Abstract Ideas” — explaining the opacity of Alice and Bilski*, SCOTUS BLOG (June 23, 2014, 1:08 PM), <https://www.scotusblog.com/2014/06/symposium-business-methods-as-abstract-ideas-explaining-the-opacity-of-alice-and-bilski/>.

5. See, e.g., *Parker v. Flook*, 437 U.S. 584, 598-99 (1978).

6. See *Examples: Abstract Ideas*, U.S. PATENT AND TRADEMARK OFFICE 1, 15-16, https://www.uspto.gov/sites/default/files/documents/abstract_idea_examples.pdf.

7. See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72-73 (2012); *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208 (2014).

8. *Mayo*, 566 U.S. at 74-75.

9. *Id.* at 76, 92.

10. *Id.* at 72-73.

11. *Id.* at 77.

12. *Id.* at 72, 79-80.

disproportionately tying up the use of the underlying natural laws, inhibiting their use in the making of further discoveries.”¹³

Alice Corp. v. CLS Bank International presented a similar question in the context of a different technology. The patentee claimed a computer system, and the use thereof, to mitigate settlement risk in a financial transaction between multiple parties by acting as a third-party intermediary.¹⁴ Applying the two-step framework from *Mayo*, the *Alice* Court held at Step One that the claims at issue covered the abstract idea of “intermediated settlement.”¹⁵ At Step Two, the Court held that the claims lacked an inventive concept because they merely involved generic computer components functioning in their routine and conventional manner to carry out the claimed abstract idea.¹⁶ The Court concluded that the claims therefore were not patent-eligible.¹⁷

Patent eligibility under Section 101 has remained a frequently litigated issue since the Court decided *Alice*. As of June 19, 2020—six years after *Alice* was handed down—the Federal Circuit has issued 134 written decisions on patent eligibility, in addition to a number of summary affirmances. We have undertaken a survey of those decisions and offer some reflections on them below.

The Road to Alice: Section 101 in the 20th Century

A series of five twentieth-century Supreme Court opinions explored exceptions to patent eligibility for laws of nature, natural phenomena, and abstract ideas. Each addressed the application of Section 101 to either computer technology or biotechnology.

In the first of these cases, *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, the claims at issue recited mixtures of different bacteria species that could successfully inoculate various plants, where each bacteria species caused no “harmful effect[s]” to the other bacteria species in the mixture.¹⁸ The Supreme Court held the claims ineligible, reasoning that, in the mixtures, each species of bacteria “perform[ed] in their natural way,” “ha[d] the same effect [they] always had,” and “[t]heir use in combination d[id] not improve in any way their natural function[.]” The Court held that

13. *Id.* at 73.

14. *Alice*, 573 U.S. at 219.

15. *Id.* at 218.

16. *See id.* at 225.

17. *Id.* at 227.

18. *See* 333 U.S. at 131.

the claimed mixtures thus merely “serve[d] the ends nature originally provided.”¹⁹

The patent claims in *Diamond v. Chakrabarty* posed a similar patent-eligibility question, but the outcome was different. The claims recited a genetically engineered bacterium that could aid in the cleaning of oil spills.²⁰ Chief Justice Burger wrote for the majority, holding that the claimed bacterium constituted a patent-eligible “manufacture” under Section 101 because it did not occur naturally.²¹ The majority reasoned that, instead, the claimed bacterium had “markedly different characteristics from any [bacterium] found in nature.”²²

In holding the patent claims ineligible for want of meaningful man-made alterations to natural bacteria, the *Funk Brothers* decision displayed a concern with overprotection of ideas. “The qualities of these bacteria,” the Supreme Court observed, “are manifestations of [the] laws of nature, free to all men and reserved exclusively to none.”²³ In contrast, the Court in *Chakrabarty* avoided underprotection of man-made organisms resulting from “human ingenuity and research.”²⁴

Similar forces were at play in the Court’s applications of Section 101 to computer technology. In *Gottschalk v. Benson*, the Court held that the discovery of a mathematical formula alone is not patent-eligible under Section 101.²⁵ The patent applicant in *Gottschalk* invented a method of programming a computer to convert “signals from binary-coded decimal form into pure binary form.”²⁶ The method relied on a previously unknown formula, but the Court held that the discovery of this formula was not itself patent-eligible.²⁷ Instead, the Court explained, the application of this formula “to a new and useful end” was required.²⁸ Because the formula had “no substantial practical application except in connection with a digital computer,” the Court held that the patent claims were “in practical effect . . . a patent on the algorithm itself” and therefore not patent-eligible.²⁹

19. *Id.*

20. *Chakrabarty*, 447 U.S. at 305.

21. *Id.* at 303.

22. *Id.* at 310.

23. *Funk Bros.*, 333 U.S. at 130.

24. 447 U.S. at 313.

25. *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972).

26. *Id.* at 65.

27. *Id.* at 71-72.

28. *Id.* at 67 (quoting *Funk Bros.*, 333 U.S. at 130 (internal quotation marks omitted)).

29. *Id.* at 71-72.

Parker v. Flook presented a question similar to the issue in *Gottschalk*. The inventor used a mathematical formula to improve a previously known method for updating alarm limits.³⁰ The Court held that the claims at issue were not patent-eligible because they “simply provide[d] a new and presumably better method for calculating alarm limit values.”³¹ In other words, the Court explained, the invention departed from prior art only by adding a patent-ineligible mathematical formula.³²

Lastly, in *Diamond v. Diehr*, the Supreme Court held patent-eligible a new process for curing rubber, notwithstanding that the process employed a well-known mathematical equation programmed into a computer.³³ The Court distinguished this case from *Flook* on the basis that the claims did “not seek to pre-empt the use of [the] equation.³⁴ Rather, they s[ought] only to foreclose from others the use of that equation in conjunction with all other steps in their claimed process” of computer-facilitated rubber curing.³⁵ Thus, the Court held, the claims in *Diehr* were patent-eligible because, “when considered as a whole,” they applied a mathematical formula “in a structure or process” that “perform[ed] a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing).”³⁶

At the risk of oversimplification, one can draw two patent-eligibility rules from this line of precedent. In the biotechnology field, organisms found in nature are not patent-eligible (*Funk Brothers*), but organisms made in a laboratory may be (*Chakrabarty*). Concerning computers and software, algorithms themselves are ineligible (*Gottschalk*; *Flook*), whereas new and useful applications of algorithms may be patent-eligible (*Diehr*).

The Road to Alice: Section 101 in the 21st Century

After a hiatus, the Court further developed its Section 101 precedent in a series of three decisions between 2010 and 2013. Each decision held ineligible patent claims based on a judicially created exception to patent eligibility. The Court adopted a consciously incremental approach and never sought to specifically define abstract ideas, natural phenomena, or laws of nature. Instead, it reasoned by analogy from its earlier case law.

30. *Parker*, 437 U.S. at 585.

31. *Id.* at 594-95.

32. *See id.*

33. *Diamond v. Diehr*, 450 U.S. 175, 178-79 (1981).

34. *Id.* at 176.

35. *Id.* at 187.

36. *Id.* at 192.

In *Bilski v. Kappos*, the Court considered the eligibility of a claimed method for hedging against risk in the context of buying and selling commodities in the energy market.³⁷ Applying the then-prevailing “machine-or-transformation” test, the Federal Circuit court determined that the claimed method was not patent-eligible because it was not tied to a machine and did not transform a particular article “into a different state or thing.”³⁸ The Supreme Court held that, although the “machine-or-transformation” test is a “useful and important clue . . . for determining whether some claimed inventions are processes under § 101,” it is not the sole standard for eligibility.³⁹ Nevertheless, the Court affirmed the Federal Circuit’s ruling that the claims were not patent-eligible.⁴⁰ Besides criticizing the machine-or-transformation test, however, the *Bilski* Court offered little guidance on how to resolve future cases presenting eligibility issues.⁴¹

That changed in 2012, when (as previewed above) the Court explicitly articulated a two-step framework for patent eligibility in *Mayo*, which concerned a method of optimizing treatment of a gastrointestinal disorder using a thiopurine drug. The *Mayo* Court noted that its two-step framework extended the logic of *Diehr* and *Flook*, each of which also concerned the relationship of a law of nature to a larger inventory scheme.⁴² The Court read *Diehr* as acknowledging patentability when “additional steps of the process integrated the equation into the process as a whole.”⁴³ *Flook*, in contrast, denied a patent when “there was no ‘inventive concept’ in the claimed application of the formula.”⁴⁴ The Court ultimately held that the *Mayo* claims were ineligible under this test because they were directed to a natural correlation between certain metabolites in the blood and the efficacy of dosages of the drug, and lacked an inventive concept because they required only routine and conventional techniques in applying this natural law.⁴⁵

Finally, the Court in *Association for Molecular Pathology v. Myriad Genetics, Inc.* held ineligible claims directed to naturally occurring DNA isolated from a human’s genome.⁴⁶ The Court reasoned that even if the

37. *Bilski v. Kappos*, 561 U.S. 593, 599 (2010).

38. *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008).

39. *Bilski*, 561 U.S. at 604.

40. *Id.* at 609, 611-13.

41. *Id.* at 604.

42. *Mayo*, 566 U.S. at 81-82.

43. *Id.* at 80.

44. *Id.* at 68.

45. *Id.* at 80, 82.

46. *Myriad*, 569 U.S. at 583-84.

patentee had arguably made a “brilliant discovery,” the claims “did not create or alter any of the genetic information” contained in that DNA, and instead, “the location and order of the nucleotides existed in nature before Myriad found them.”⁴⁷ The Court held that the act of “separating [the DNA] from its surrounding genetic material [was] not an act of invention.”⁴⁸ On the other hand, the Court held patent-eligible claims directed to cDNA, which unlike the isolated DNA were “exons-only molecule[s] that [were] not naturally occurring.”⁴⁹

The Alice Case

The latest pronouncement from the Supreme Court regarding patent eligibility was *Alice* itself, which was decided in June 2014. As noted above, the claims at issue in *Alice* recited a system and method of mitigating settlement risk in financial transactions using software code, data processing systems, and computers. A panel of the Federal Circuit held the claims patent-ineligible.⁵⁰ Sitting en banc, the appeals court affirmed.⁵¹ But the court was highly fractured, with no single opinion commanding a majority, several separate opinions in concurrence or dissent, as well as “additional reflections” from Chief Judge Rader.⁵² Judge Lourie’s plurality opinion most closely reflected the eventual Supreme Court approach insofar as it determined whether the claim constituted an abstract idea and asked whether there was “genuine human contribution to the claimed subject matter.”⁵³ But an underlying discontent with *Mayo* among the Federal Circuit judges was discernable. For instance, in his “additional reflections,” Chief Judge Rader praised *Chakrabarty* and *Diehr* for “enforcing the patent law as written” but lamented that “these giants” had since “bowed to new judicial influences.”⁵⁴

Upon plenary review, the Supreme Court ruled that the *Alice* claims were patent-ineligible.⁵⁵ Writing for a unanimous Court, Justice Thomas applied the *Mayo* two-step framework.⁵⁶ At Step One, the Court held that

47. *Id.* at 590-91.

48. *Id.* at 591.

49. *Id.* at 590-92, 594.

50. *CLS Bank Int’l v. Alice Corp.*, 685 F.3d 1341, 1356 (Fed. Cir. 2012).

51. *CLS Bank Int’l v. Alice Corp.*, 717 F.3d 1269, 1292 (Fed. Cir. 2013).

52. *See, e.g., id.* at 1292-93, 1333.

53. *Id.* at 1283.

54. *Id.* at 1334.

55. *Alice*, 573 U.S. at 227.

56. *Id.* at 217-18.

the claims were directed to the abstract idea of “intermediated settlement,” which was a long-established fundamental practice.⁵⁷ The Court held that there was “no meaningful distinction” between the claims in *Alice* and the claims in *Bilski* in this regard.⁵⁸ At Step Two, the Court held that the claims lacked an inventive concept, as they “simply recite[d] the concept of intermediated settlement as performed by a generic computer” and did not improve the functioning of the computer itself.⁵⁹ This, the Court held, was not “‘enough’ to transform an abstract idea into a patent-eligible invention” under existing precedent.⁶⁰

Alice embodies the current Court’s incremental, common-law approach to deciding patent eligibility under Section 101. Some commentators have contended that it was “an easy case, flowing logically from *Bilski* and *Mayo*,”⁶¹ and “d[id] little to change, or even to clarify, pre-existing law.”⁶² Other commentators believed that the decision would send strong signals to the Federal Circuit and the Patent and Trademark Office in two primary ways. First, *Alice* confirmed that *Mayo*’s framework is to be applied to all patent-eligibility inquiries regardless of the nature of the subject matter.⁶³ Second, *Alice* “communicate[d] to the Federal Circuit that it must play a more active role in disallowing patents that claim abstract ideas and laws and products of nature.”⁶⁴

The Effects of *Alice* and Post-*Alice* Case Law

Alice had immediate impacts on patent litigation. First, it greatly increased the importance of Section 101. In May 2014, a month before *Alice* issued, only 7% of U.S. Patent and Trademark Office (“PTO”) rejections were based on Section 101.⁶⁵ By August 2015, just over one

57. *Id.* at 218.

58. *Id.* at 221.

59. *Id.* at 225.

60. *Id.* at 225-26.

61. Justin Nelson, *Symposium: For Patent Litigants, Court Affirms Status Quo*, SCOTUSBLOG (June 20, 2014, 1:36 PM), <https://www.scotusblog.com/2014/06/symposium-for-patent-litigants-court-affirms-status-quo/>.

62. John Duffy, *Opinion Analysis: The Uncertain Expansion of Judge-made Exceptions to Patentability*, SCOTUSBLOG (June 20, 2014, 12:46 PM), <https://www.scotusblog.com/2014/06/opinion-analysis-the-uncertain-expansion-of-judge-made-exceptions-to-patentability/>.

63. See Robert Sachs, *What Are the Implications of Alice v CLS*, FENWICK & WEST LLP (Aug. 29, 2014), <https://www.fenwick.com/Videos/Pages/What-are-the-implications-of-Alice-v-CLS.aspx>.

64. Sandra Park, *Symposium: The Supreme Court as Promoter of Progress*, SCOTUSBLOG (June 20, 2014, 10:06 AM), <https://www.scotusblog.com/2014/06/symposium-the-supreme-court-as-promoter-of-progress/>.

65. Austin Underhill, *Who Is Alice, and Why Is She Driving Patent Attorneys Mad as Hatters?*, ABOVE THE LAW (Feb. 19, 2016, 1:52 PM), <https://abovethelaw.com/2016/02/who-is-alice-and-why-is-she-driving-patent-attorneys-mad-as-hatters/?rf=1>.

year after *Alice* issued, Section 101 rejections more than doubled to 15%.⁶⁶ In the specific context of business method patents over this same period, rejections based on Section 101 skyrocketed from 31% to 82%.⁶⁷ Second, *Alice* appeared to exert a deterrent effect on patent applications, particularly in the software field. Within six months of the decision, the number of such filings fell by 40%.⁶⁸

In the six years since *Alice* was decided, courts have been quite skeptical of certain patent claims in Section 101 cases. As of June 19, 2020, district courts have issued decisions in 803 cases involving various technologies and subject matter.⁶⁹ In 416 of those cases, the court held that the claims at issue were patent-ineligible.⁷⁰ In 233 of those cases, the claims were held patent-eligible.⁷¹ And in 154 of those cases, the court held that the patent-eligibility determination was premature.⁷² In its 134 written decisions on patent eligibility, the Federal Circuit has held claims ineligible in 109 cases and patent-eligible in 25 cases.⁷³ In four cases, the appeals court held that the eligibility determination was premature in view of, for instance, the existence of genuine factual disputes and claim construction disputes.⁷⁴

Although *Alice* has been regarded by some commentators as the most influential decision to have “shaped patent law” in the past decade,⁷⁵ others believe that several aspects of determining patent eligibility still remain unsettled, with one stating that the Federal Circuit has “struggled with identifying abstract ideas, as well as the ‘something more’ required to meet

66. *Id.*

67. *Id.*

68. Jasper L. Tran, *Software Patents: A One-Year Review of Alice*, 97 J. PAT. & TRADEMARK OFF. SOC'Y 532, 540 (2015).

69. The authors maintain a database of all written post-*Alice* decisions in the district courts and the Federal Circuit, as well as covered business method review and other decisions in the PTAB. Copies are available on request.

70. See Appendix A.

71. *Id.*

72. *Id.*

73. In some cases, the Federal Circuit has held ineligible a portion of the claims at issue while upholding the eligibility of others. *E.g.*, *Uniloc USA, Inc. v. ADP, LLC*, 772 F. App'x 890, 899, 901 (Fed. Cir. 2019).

74. In two cases, the court found some claims ineligible and some claims eligible. See *Uniloc*, 772 F. App'x at 899; *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011-12 (Fed. Cir. 2018). In one case, the court found some claims ineligible but held that the eligibility inquiry was premature as to other claims. See *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1370-71 (Fed. Cir. 2018).

75. Ryan Davis, *These 10 Decisions Remade the Patent Landscape*, LAW360 (July 16, 2020, 6:45 PM), https://www.law360.com/appellate/articles/1289186/these-10-decisions-remade-the-patent-landscape?nl_pk=07fa9664-2786-43c9-88b2-9823c14ec1b6&utm_source=newsletter&utm_medium=email&utm_campaign=appellate.

part two of the [*Mayo-Alice*] test.”⁷⁶ The issue, according to several Federal Circuit judges, is that the Supreme Court has never created a “single, succinct, usable definition or test” for identifying an abstract idea. Instead, it has employed a “common law methodology” that amounts to a “more flexible approach.”⁷⁷

But what some register as a complaint, others see as a virtue. One of the lessons of *Bilski* is that there is no one-size-fits-all “test” for eligibility. The *Mayo-Alice* framework represents the Supreme Court’s guidance to lower courts (and the PTO), constraining eligibility decisions while still allowing for the claim-specific inquiry necessary in this area.

In fact, the Federal Circuit has given practitioners, judges, and examiners a wealth of exemplars regarding the application of this framework in the six years since *Alice*. We have compiled a chart of every Section 101 written decision from the Federal Circuit since *Alice* as of June 19, 2020; it is attached as Appendix A. Together with the Supreme Court “canon,” these cases provide meaningful guidance in a wide variety of cases. To be sure, they don’t answer every question—that is why we have judges.

An analysis of the post-*Alice* decisions, particularly the precedential opinions of the Federal Circuit, reveals that the common-law approach has manifested itself across four categories of post-*Alice* cases in the Federal Circuit, three of which concern applications of the *Mayo-Alice* framework. The fourth represents the frontiers and future of patent law.

1. The first category consists of cases involving patent claims analytically similar to those in *Alice* that have been held patent-*ineligible*. For instance, in several cases, the Federal Circuit has held ineligible patent claims involving business methods and “fundamental economic practices” using known technology in its routine and conventional manner. *Ultramercial, Inc. v. Hulu LLC* is a prime example. In *Ultramercial*, the court held ineligible claims reciting an advertising method where advertisers pay for Internet users to view copyrighted materials in exchange for viewing their advertisement.⁷⁸ Similarly, in *OIP Technologies, Inc. v. Amazon.com, Inc.*, the court held ineligible claims to a price-optimization method.⁷⁹ In *Mortgage Grader, Inc. v. First Choice Loan Services, Inc.*, the court held ineligible claims to systems and methods for assisting

76. *What Is Alice?*, FISH & RICHARDSON, <https://www.fr.com/what-is-alice/> (last visited Nov. 21, 2020).

77. *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016).

78. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 717 (Fed. Cir. 2014).

79. 788 F.3d 1359, 1364 (Fed. Cir. 2015).

borrowers in obtaining loans.⁸⁰ In *Smartflash LLC v. Apple Inc.*, the Federal Circuit held ineligible claims covering systems and methods for accessing data based on payment.⁸¹ And in *Innovation Sciences, LLC v. Amazon.com, Inc.*, the court held ineligible claims to an online method for a payment server to support online buying over the Internet.⁸²

The Federal Circuit has also in numerous cases held ineligible claims involving the collection or manipulation of data. In *Content Extraction and Transmission, LLC v. Wells Fargo Bank*, for example, the court held ineligible claims directed to a computerized method of digitizing, recognizing, and storing data contained in physical documents.⁸³ The court also held ineligible claims directed to delivering selected media content to portable devices in *Affinity Labs of Texas, LLC v. Amazon.com, Inc.*; claims to collecting, displaying, and manipulating data in XML documents in *Intellectual Ventures I LLC v. Capital One Financial Corp.*; claims to encoding and decoding image data in *RecogniCorp, LLC v. Nintendo Co.*; claims to calculating, analyzing, and displaying investment data in *SAP America Inc. v. InvestPic, LLC*; and claims to associating a security level with access to data in *Dropbox, Inc. v. Synchronoss Technologies*.⁸⁴

These are merely exemplars; in fact, most of the Federal Circuit's post-*Alice* cases fall into this category. That is due in part to the reality that the claims most likely to be litigated through an appellate decision are those most in peril under *Alice*. Indeed, there is an ineligibility bias in appellate procedure: a district court decision holding claims *ineligible* is (usually) immediately appealable, because it ends the litigation; whereas a ruling that the claims are *eligible* (usually) allows the litigation to proceed to decision on other grounds, or settlement. Moreover, a fair number of these cases have involved pre-*Bilski* applications that were prosecuted using the machine-or-transformation test of which the Supreme Court disapproved.

2. The second category of cases involves claims held patent-*eligible* at Step One or Step Two of the *Mayo-Alice* framework. In *DDR Holdings, LLC v. Hotels.com*, the Federal Circuit held patent-eligible claims reciting a method of generating composite web pages combining visual elements of a

80. 811 F.3d 1314, 1326 (Fed. Cir. 2016).

81. 680 F. App'x 977, 984 (Fed. Cir. 2017).

82. 778 F. App'x 859, 864 (Fed. Cir. 2019).

83. Michael Borella, *Content Extraction and Transmission, LLC vs. Wells Fargo Bank* (Fed. Cir. 2014), PATENT DOCS (Jan. 5, 2015), <https://www.patentdocs.org/2015/01/content-extraction-and-transmission-llc-vs-wells-fargo-bank-fed-cir-2014.html>.

84. 838 F.3d 1266, 1272 (Fed. Cir. 2016); 850 F.3d 1332, 1342 (Fed. Cir. 2017); 855 F.3d 1322, 1328 (Fed. Cir. 2017); 898 F.3d 1161, 1170 (Fed. Cir. 2018); 815 F. App'x 529, 534 (Fed. Cir. 2020).

host site with that of a third-party merchant.⁸⁵ The court reasoned that the claims were “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” and “over[rode] the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink.”⁸⁶ The court, however, never explicitly stated whether this analysis was being conducted at Step One or Step Two of the patent-eligibility analysis.⁸⁷

Over a year and a half passed without the Federal Circuit issuing another written decision holding claims patent-eligible under Section 101. Then, in May 2016, the court in *Enfish, LLC v. Microsoft Corporation* held patent-eligible claims to a “self-referential” database at Step One of the *Mayo-Alice* framework.⁸⁸ The court interpreted Step One as asking “whether the focus of the claims is on the specific asserted improvement capabilities . . . or, instead, on a process that qualifies as an abstract idea for which computers are invoked merely as a tool.”⁸⁹ The court held that the claims were not directed to an abstract idea because they were “directed to a specific implementation of a solution to a problem in the software arts,” and provided a “specific improvement to the way computers operate.”⁹⁰

The Federal Circuit in *McRO, Inc. v. Bandai Namco Games America Inc.* also held the claims at issue patent-eligible at Step One.⁹¹ In *McRO*, the claims were directed to “automatically animating lip synchronization and facial expression of three-dimensional characters.”⁹² At Step One, the court held that the claims were not directed to an abstract idea, and instead provided a “technological improvement over the existing, manual 3-D animation techniques.”⁹³ The court did not reach Step Two of the analysis, similar to later decisions holding claims patent-eligible, such as in *Thales Visionix Inc. v. United States* (2017), *Finjan, Inc. v. Blue Coat Systems, Inc.* (2018); *Ancora Technologies, Inc. v. HTC America, Inc.* (2018); and *SRI International, Inc. v. Cisco Systems, Inc.* (2019).⁹⁴

The Federal Circuit has also held claims patent-eligible at Step Two, even after holding that the claims were directed to an ineligible concept at

85. *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1248-49 (Fed. Cir. 2014).

86. *Id.* at 1257-58.

87. *Id.*

88. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1330, 1346 (Fed. Cir. 2016).

89. *Id.* at 1335-36.

90. *Id.* at 1336, 1339.

91. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1316 (Fed. Cir. 2016).

92. *Id.* at 1307.

93. *Id.* at 1315-16.

94. 850 F.3d 1343, 1349 (Fed. Cir. 2017); 879 F.3d 1299, 1306 (Fed. Cir. 2018); 908 F.3d 1343, 1349 (Fed. Cir. 2018); 930 F.3d 1295, 1304 (Fed. Cir. 2019).

Step One. In *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, the court held that the claims at issue were directed to an abstract idea at Step One, but that the claimed unconventional combination of otherwise generic components nevertheless offered an inventive concept at Step Two.⁹⁵ Specifically, the claims were directed to filtering content from a computer network, which the court held was an abstract idea.⁹⁶ At Step Two, the court held that the claims, “taken individually, recite generic computer, network and Internet components, none of which is inventive by itself.”⁹⁷ But the court held that the claims nonetheless contained an inventive concept because they recited a “non-conventional and non-generic arrangement of” those “known, conventional pieces,” and ultimately provided a “technical improvement over prior art ways of filtering” Internet content.⁹⁸

Likewise, in *Amdocs (Israel) Limited v. Openet Telecom, Inc.*, the court held patent-eligible claims directed to a “computer program for merging data in a network-based filtering and aggregating platform.”⁹⁹ The court explained that “even if we were to agree that” the claims were “directed to an ineligible abstract idea under step one,” the claims were “eligible under step two because [they] contain[ed] a sufficient ‘inventive concept.’”¹⁰⁰ In particular, the court held, the claims recited a “distributed enhancement” of processing network records that represented a “critical advancement over the prior art.”¹⁰¹

Finally, from the issuance of *Alice* in June 2014 to early 2018, the Federal Circuit issued only one written decision holding claims in the biotechnology/life sciences space to be patent-eligible. In *Rapid Litigation Management Ltd. v. CellzDirect, Inc.*, the court held patent-eligible claims reciting a cryopreservation technique for hepatocytes.¹⁰² The court held that, at Step One, the claims were not directed to an abstract idea because they were directed to a “new and improved” technique for “preserving hepatocyte cells for later use” by applying a new discovery that the hepatocytes could “survive multiple freeze-thaw cycles.”¹⁰³ The court went further by holding that even at Step Two, the claims contained an

95. *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

96. *Id.* at 1348.

97. *Id.* at 1349.

98. *Id.* at 1349-50.

99. *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1291 (Fed. Cir. 2016).

100. *Id.* at 1300.

101. *Id.*

102. *Rapid Litig. Mgm't Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1048, 1045 (Fed. Cir. 2016).

103. *Id.* at 1050.

inventive concept because this improved process provided significant benefits over the prior art, including that it allowed for hepatocyte preparations that “no longer exhibit unacceptable loss of viability.”¹⁰⁴

3. The third category of post-*Alice* cases involves diagnostic method claims, which the Federal Circuit has consistently held patent-ineligible under the Supreme Court’s precedent in *Mayo*. *Alice* has played a smaller role in these cases. Several Federal Circuit judges have expressed their discontent with the precedent in this particular area, feeling bound by the precedent but disagreeing with the result. In doing so, those judges have called for the Supreme Court to revisit the issue and provide additional clarification.

The first of those post-*Alice* cases was *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, in which the Federal Circuit held ineligible a method of detecting paternally inherited cell-free fetal DNA in maternal blood.¹⁰⁵ Judge Linn concurred, stating that “but for the sweeping language in the Supreme Court’s *Mayo* opinion, I see no reason, in policy or statute, why this breakthrough invention should be deemed patent ineligible.”¹⁰⁶ He emphasized that the method amounted to a “truly meritorious . . . groundbreaking invention,” as the patent-seeking scientists discovered for the first time that cell-free fetal DNA was present in maternal plasma, thereby enabling “the first marketed non-invasive prenatal diagnostic test” for conditions like Down Syndrome.¹⁰⁷

The patentee in *Ariosa* filed a petition for rehearing en banc, which the Federal Circuit denied.¹⁰⁸ In concurring with the denial, Judge Dyk praised the *Mayo-Alice* framework for “work[ing] well when the abstract idea or law of nature in question is well known,” including in *Mayo*.¹⁰⁹ But he expressed disagreement with *Mayo* to the extent that it resulted in underprotection by “conclud[ing] that inventive concept cannot come from discovering something new in nature,” as in *Ariosa*.¹¹⁰ Judge Newman also emphasized that “the claimed method was not previously known.”¹¹¹ The patentee petitioned for a writ of certiorari, and a number of amicus

104. *Id.*

105. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1373-74, 1379-80 (Fed. Cir. 2015).

106. *Id.* at 1381 (Linn, J., concurring).

107. *Id.*

108. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.* No. 14-1139 (Fed. Cir.), D.I. 101 (filed Aug. 13, 2015); *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 809 F.3d 1282 (Fed. Cir. 2015).

109. *Ariosa*, 809 F.3d at 1288-89 (Dyk, J., concurring in denial of rehearing en banc).

110. *Id.* at 1289.

111. *Id.* at 1294 (Newman, J., dissenting from the denial of rehearing en banc).

briefs were filed in support. But the Supreme Court ultimately denied the petition.

Since *Ariosa*, the Federal Circuit has issued five written decisions holding diagnostic method claims ineligible: *Genetic Technologies, Ltd. v. Merial L.L.C.*, involved a method of detecting a coding region of a person's genome based on a natural correlation between variations in DNA sequence non-coding regions and allele presence in coding regions; *Cleveland Clinic Foundation v. True Health Diagnostics LLC*, involved a method of detecting cardiovascular disease in a patient based on a natural correlation between certain enzyme levels and cardiovascular disease; *Roche Molecular Sys., Inc. v. CEPHEID*, involved a method of detecting a bacterium in a biological sample; *Athena Diagnostics v. Mayo Collaborative Services*, involved a method of diagnosing neurological disorders by detecting antibodies to a certain protein based on a natural correlation between the presence of those antibodies and the neurological disorders; and *Cleveland Clinic Foundation v. True Health Diagnostics LLC*, involved a method of detecting elevated levels of a certain enzyme in the blood sample of a person with cardiovascular disease, in comparison to a control group.¹¹²

Judge Newman dissented in *Athena* by opining that the claimed diagnostic method amounted to a groundbreaking medical discovery that applied previously unknown natural correlations.¹¹³ She further stated that Section 101 “does not exclude new methods of diagnosis of human ailments.”¹¹⁴ Although the panel majority recognized Judge Newman's position “from the standpoint of policy, and history, [and] the public interest,” the majority nevertheless held that it was bound by the Supreme Court's precedent, under which the claims were ineligible.¹¹⁵

The patentee in *Athena* filed a petition for rehearing en banc, which the Federal Circuit denied.¹¹⁶ But, the denial was accompanied by eight separate opinions, and several judges filed concurrences to express their perceived problems with *Mayo*.¹¹⁷ For example, Judge Lourie noted that while *Mayo* was binding, he would limit the natural law exception under

112. 818 F.3d 1369, 1374-77 (Fed. Cir. 2016); 859 F.3d 1352, 1360-63 (Fed. Cir. 2017); 905 F.3d 1363, 1371, 1374 (Fed. Cir. 2018); 915 F.3d 743, 754-55 (Fed. Cir. 2019); 760 F. App'x 1013, 1019 (Fed. Cir. 2019).

113. *Athena*, 915 F.3d at 757 (Newman, J., dissenting).

114. *Id.* at 759 (Newman, J., dissenting).

115. *Id.* at 753 n.4.

116. *Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, No. 17-2508 (Fed. Cir.), D.I. 107 (filed Apr. 8, 2019); *Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, 927 F.3d 1333 (Fed. Cir. 2019).

117. *See, e.g., Athena*, 927 F.3d at 1335-37.

Section 101 to “only claims directed to the natural law itself, [not] uses or detection of natural laws.”¹¹⁸ Judge Hughes stated that the “bottom line for diagnostics patents is problematic. But . . . we are bound by the Supreme Court.”¹¹⁹ And according to Judge Dyk, the “problem with § 101 arises not in implementing the abstract idea approach of *Alice*, but rather in implementing the natural law approach of *Mayo*.”¹²⁰ While *Mayo* is “sound overall,” it fails to “leave room for sufficiently specific diagnostics patents.”¹²¹ Athena subsequently filed a petition for a writ of certiorari, seeking further clarification on patent-eligible subject matter. However, despite the Solicitor General’s urging that Athena’s case would be an ideal vehicle for the Supreme Court to provide much needed guidance on Section 101, the Court denied Athena’s petition on January 13, 2020.¹²²

4. The fourth category of cases transcends applications of the *Mayo-Alice* framework and presents patent-eligibility questions that the Supreme Court is yet to address. In two of the cases discussed below, petitions for certiorari were filed in late 2018. The Supreme Court, however, denied both petitions in January 2020.

Vanda—Treatment Method Claims

In *Vanda Pharmaceuticals, Inc. v. West-Ward Pharmaceuticals International Ltd.*, a panel majority of the Federal Circuit held patent-eligible claims to a method of using iloperidone to treat patients having a certain genotype for schizophrenia.¹²³ At Step One, the majority held that the claims were directed to a “‘new way of using an existing drug’ that is safer for patients because it reduces the risk of QTc prolongation,” or the time between waves of the heart rhythm.¹²⁴ The majority further explained that the claims are “directed to a specific method of treatment for specific patients using a specific compound at specific doses to achieve a specific outcome,” and thus “recite[d] more than” a natural correlation.¹²⁵ The majority did not reach Step Two. Chief Judge Prost dissented, stating that the majority conflated Step One with Step Two. Chief Judge Prost explained that the claims at issue were indistinguishable from the ineligible

118. *Id.* at 1335 (Lourie, J., concurring in the denial of rehearing en banc).

119. *Id.* at 1337 (Hughes, J., concurring) (denying rehearing en banc).

120. *Id.* at 1339 (Dyk, J., concurring) (denying rehearing en banc).

121. *Id.*

122. *Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, 140 S. Ct. 855 (2020).

123. *Vanda Pharm., Inc. v. West-Ward Pharm. Int’l, Ltd.*, 887 F.3d 1117, 1121, 1136 (Fed. Cir. 2018).

124. *Id.* at 1135.

125. *Id.* at 1136.

Mayo claims, and that the majority’s reference to the claimed method being “safer for patients” was, like the *Mayo* claims, merely an “optimization of an existing treatment.”¹²⁶

West-Ward (now known as Hikma Pharmaceuticals USA, Inc.) subsequently filed a petition for a writ of certiorari, which presented the question of “whether patents that claim a method of medically treating a patient automatically satisfy Section 101 of the Patent Act, even if they apply a natural law using routine and conventional steps.”¹²⁷ Much of the cert-stage briefing focused on whether the Federal Circuit actually adopted a categorical rule that exempts treatment method claims from the *Mayo* analysis. Vanda insisted that “[t]he Federal Circuit did not announce a categorical rule of patent eligibility for method-of-treatment patents” but instead faithfully applied the *Mayo-Alice* framework in determining that the patent was directed to a patent-eligible application of a law of nature.¹²⁸ Hikma disagreed, and accused the Federal Circuit of “effectively overrul[ing] *Mayo* by refusing to apply it to ‘all’ treatment method claims.”¹²⁹ The Supreme Court invited the Solicitor General to provide its views on the issue. The Solicitor General argued against granting the petition, stating that unlike *Athena*, the case was “not an optimal vehicle for bringing greater clarity because the court of appeals majority arrived at the correct result.”¹³⁰ On January 13, 2020, the Supreme Court denied Hikma’s petition.¹³¹

Since deciding *Vanda*, the Federal Circuit has held other treatment method claims patent-eligible: *Natural Alternatives Int’l, Inc. v. Creative Compounds, LLC*, involved a method of administering “certain quantities of beta-alanine to a human subject” that “results in specific physiological benefits for athletes engaged in certain intensive exercise”; and *Endo Pharmaceuticals Inc. v. Teva Pharmaceuticals USA, Inc.*, involved a method of treating pain in a renally impaired patient with oxymorphone.¹³²

Not all treatment method claims, however, have survived scrutiny. Most recently, in *INO Therapeutics LLC v. Praxair Distribution Inc.*, a panel majority held ineligible claims reciting the administration of 20 ppm

126. *Id.* at 1142 (Prost, C.J., dissenting).

127. Petition for a Writ of Certiorari at i, *Hikma Pharm. USA, Inc. v. Vanda Pharm. Inc.*, 140 S. Ct. 911 (2020) No. 18-817.

128. Brief in Opposition at 1, *Hikma Pharm. USA, Inc. v. Vanda Pharm. Inc.*, 140 S. Ct. 911 (2020) No. 18-817.

129. Reply to Brief in Opposition at 6, *Vanda*, 140 S. Ct. 911 No. 18-817.

130. Brief for the United States as Amicus Curiae at 8, 21-23, *Vanda*, 140 S. Ct. 911 No. 18-817.

131. *Hikma Pharm. USA Inc. v. Vanda Pharm. Inc.*, 140 S. Ct. 911 (2020).

132. 918 F.3d 1338, 1344 (Fed. Cir. 2019); 919 F.3d 1347, 1348 (Fed. Cir. 2019).

of nitric oxide to treat hypoxic respiratory failure only in newborns not suffering from left ventricle disorder.¹³³ Although nitric oxide had long been used for such treatment, a third party discovered that such treatment should be withheld from newborns with left ventricle disorder because it increased the risk of pulmonary edema.¹³⁴ Writing for the majority, Chief Judge Prost rejected the patentee’s argument that treatment method claims are “automatically patent eligible.”¹³⁵ The majority held that, unlike the patent-eligible claims in *Vanda*, *Natural Alternatives*, and *Endo Pharmaceuticals*, the *INO Therapeutics* claims provided no new treatment method.¹³⁶ Instead, the claims recited a known treatment method and then, based on the newly discovered natural phenomenon, simply instructed doctors to withhold using it on newborns with left ventricle disorder.¹³⁷ That is, the majority held that the claims recited a natural phenomenon together with only “steps [that] are either necessary to manifest the natural [phenomenon] or are undisputedly routine and conventional.”¹³⁸ Judge Newman dissented, stating that the claims were patent-eligible because, for instance, the claimed method “does not exist in nature” and instead “was designed by and is administered by humans.”¹³⁹

Berkheimer—Underlying Questions of Fact

HP Inc. v. Berkheimer, involved the question of “whether patent eligibility is a question of law for the court based on the scope of the claims or a question of fact for the jury based on the state of the art at the time of the patent.”¹⁴⁰ The claims at issue in *Berkheimer* related to “digitally processing and archiving files in a digital asset management system.”¹⁴¹ The district court granted summary judgment on the basis that the claims were not patent-eligible.¹⁴² On appeal, the Federal Circuit held at Step One that the claims were directed to the abstract idea of “parsing, comparing, and storing data.”¹⁴³ At Step Two, the court held that the “question of

133. *INO Therapeutics LLC v. Praxair Distribution Inc.*, 782 F. App’x 1001, 1003, 1012 (Fed. Cir. 2019).

134. *Id.* at 1002-03.

135. *Id.* at 1006.

136. *Id.* at 1007-08.

137. *Id.* at 1009.

138. *Id.* at 1011.

139. *Id.* at 1014.

140. Petition for Writ of Certiorari at i, *HP Inc. v. Berkheimer*, 140 S. Ct. 911 (2020) No. 18-415.

141. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1362 (Fed. Cir. 2018), *cert. denied*, 140 S. Ct. 911 (2020).

142. *Id.* at 1363.

143. *Id.* at 1366.

whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.”¹⁴⁴ Pointing to the patentee’s reliance on the patent’s specification, which described improvements over the prior art, the Federal Circuit concluded that the district court erred by granting summary judgment because there was a genuine issue of material fact as to whether certain of the claims contained an inventive concept.¹⁴⁵

HP petitioned for rehearing en banc, which the Federal Circuit denied.¹⁴⁶ Judges Moore and Lourie each issued concurrences.¹⁴⁷ In his concurrence, Judge Lourie observed that holding that “step two . . . may involve the type of fact-finding that underlies §§ 102 and 103[] further complicat[es] what used to be a fairly simple analysis of patent eligibility under § 101.”¹⁴⁸

HP petitioned for a writ of certiorari, arguing that the Federal Circuit replaced the *Mayo-Alice* framework with a “fact-intensive test . . . that will prolong meritless litigation and waste judicial and party resources.”¹⁴⁹ Berkheimer, in contrast, framed the Federal Circuit’s decision as a narrow one holding only that disputed facts were present in this specific case. According to Berkheimer, the eligibility issue could not “be resolved via legal reasoning” because “[i]t is a classical factual dispute” that requires fact-finding by a district court.¹⁵⁰ The Supreme Court invited the Solicitor General to weigh in on the issue. In its amicus brief, the Solicitor General argued that “[g]ranteeing review in this case to address th[e] procedural question” of “whether the Section 101 patent-eligibility inquiry calls for a legal determination by courts, a factual determination by juries, or both” “would . . . be premature” because that question “would be difficult to answer in any cogent manner while uncertainty about the substance of the Section 101 inquiry persists.”¹⁵¹ On January 13, 2020, the Supreme Court denied HP’s petition.¹⁵²

The effects of *Berkheimer* have been noticeable in the district courts. Since the Federal Circuit’s ruling, the success rate for invalidating patents in summary judgment motions under *Alice* has plummeted from 69% to

144. *Id.* at 1368.

145. *Id.* at 1368-70.

146. *Berkheimer v. HP Inc.*, No. 17-1437 (Fed. Cir.), D.I. 56 (filed Mar. 12, 2018); *Berkheimer v. HP Inc.*, 890 F.3d 1369 (Fed. Cir. 2018).

147. *Id.* at 1370, 1374.

148. *Id.* at 1375. (Lourie, J., concurring in denial of rehearing en banc).

149. Petition for a Writ of Certiorari at 2, *Berkheimer*, 140 S. Ct. 911 No. 18-415.

150. Brief in Opposition at 2, *Berkheimer*, 881 F.3d 1360 No. 18-415.

151. Brief for the United States as Amicus Curiae at 14, *Berkheimer*, 140 S. Ct. 911 No. 18-415.

152. *HP Inc. v. Berkheimer*, 140 S. Ct. 911 (2020).

46%.¹⁵³ The success rate of ineligibility challenges in general similarly has dropped from 67% to 42% since *Berkheimer* issued.¹⁵⁴ As of June 19, 2020, of the total 154 district court decisions denying early Section 101 motions on the basis that they were premature (i.e., factual issues, claim construction), 47% of them have been issued in just the two years since *Berkheimer* (73 decisions).¹⁵⁵ The Federal Circuit has in two cases vacated grants of early motions based on Section 101: *Cellspin Soft, Inc. v. Fitbit, Inc.*, and *MyMail, Ltd. v. Oovoo, LLC*.¹⁵⁶ However, the Federal Circuit has continued to affirm grants of early motions on the basis of ineligibility in many cases. Of the 28 post-*Berkheimer* Federal Circuit written decisions holding claims ineligible, 27 of them were appeals from decisions on Rule 12(b)/Rule 12(c) motions (19) or summary judgment motions (8).¹⁵⁷

It should also be noted that, shortly after *Berkheimer*, the Federal Circuit took a similar approach in *Aatrix Software, Inc. v. Green Shades Software, Inc.* (2018). The claims in *Aatrix* recited “systems and methods for designing, creating, and importing data into a viewable form on a computer so that a user can manipulate the form data and create viewable forms and reports.”¹⁵⁸ The district court granted dismissal on the basis that the claims were ineligible. On appeal, a panel majority of the Federal Circuit reiterated that “there can be subsidiary fact questions which must be resolved en route to the ultimate legal determination” of patent eligibility.¹⁵⁹ Relying on factual allegations in support of eligibility made in a proposed second amended complaint, the majority remanded to the district court.¹⁶⁰ Judge Reyna concurred in part and dissented in part. First, Judge Reyna stated that “the majority opinion attempts to shift the character of the § 101 inquiry from a legal question to a predominately factual inquiry. The risk of this approach is that it opens the door in both steps of the *Alice* inquiry for the introduction of an inexhaustible array of extrinsic evidence, such as prior art, publications, other patents, and expert

153. Ryan Davis, *Quick Alice Wins Dwindling in Wake of Berkheimer Ruling*, LAW360 (July 25, 2019, 8:47 AM), <https://www.law360.com/appellate/articles/1181804/quick-alice-wins-dwindling-in-wake-of-berkheimer-ruling>.

154. Ryan Davis, *Alice Still Packs a Punch, But With a Little Less Sting*, LAW 360 (June 19, 2020, 8:38 PM), https://www.law360.com/appellate/articles/1284957/alice-still-packs-a-punch-but-with-a-little-less-sting?nl_pk=07fa9664-2786-43c9-88b2-9823c14ec1b6&utm_source=newsletter&utm_medium=email&utm_campaign=appellate.

155. See Appendix A.

156. 927 F.3d 1306 (Fed. Cir. 2019); 934 F.3d 1373 (Fed. Cir. 2019).

157. See Appendix A.

158. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1123 (Fed. Cir. 2018).

159. *Id.* at 1128.

160. *Id.* at 1129-30.

opinion.”¹⁶¹ Second, Judge Reyna noted that the Second Amended Complaint had not been filed, leave to amend had not been granted, and the motion to dismiss pertained only to the First Amended Complaint.¹⁶² He stated that he would therefore have “vacate[d] and remand[ed] on the motion for leave to file [the proposed] Second Amended Complaint,” and that the Federal Circuit “should have decided [the case] on [that] issue alone.”¹⁶³

Finally, we note that, since *Berkheimer*, the Federal Circuit arguably has not been entirely consistent in articulating the relevant standard. For instance, in *Cisco Systems, Inc. v. Uniloc 2017 LLC*, the court stated that “[p]atent eligibility under 35 U.S.C. § 101 is a question of law, based on underlying factual findings.”¹⁶⁴ But in *Electronic Communication Technologies, LLC v. ShoppersChoice.com, LLC*, the court stated that “[p]atent eligibility under § 101 is an issue of law that *sometimes* contains underlying issues of fact.”¹⁶⁵

Cellspin—Presumption of Eligibility

In *Cellspin Soft, Inc. v. Fitbit, Inc.*, the Federal Circuit explicitly held for the first time that, just as there is a presumption of validity, there is a presumption of patent eligibility under Section 101.¹⁶⁶ The Supreme Court, however, has never stated that such a presumption applies to the eligibility determinations, and there are good reasons to think that it does not. That discussion, however, is beyond the scope of this article.

CardioNet—Consideration of Extrinsic Evidence

In *CardioNet, LLC v. InfoBionic, Inc.*, a panel majority held that, in assessing patent eligibility, courts “need not consult the prior art to see if, in fact,” “assertions of improvement in [a] patent’s written description are true.”¹⁶⁷ The district court had granted dismissal on the basis that the claims at issue, which related to “cardiac monitoring systems and techniques for detecting and distinguishing atrial fibrillation and atrial flutter from other various forms of cardia arrhythmia,” were ineligible.¹⁶⁸ The majority held that, at Step One, the claims were not directed to an

161. *Id.* at 1130 (Reyna, J., concurring-in-part, dissenting-in-part).

162. *Id.* at 1131.

163. *Id.* at 1130.

164. 813 F. App’x 495, 497 (Fed. Cir. 2020).

165. 958 F.3d 1178, 1181 (Fed. Cir. 2020) (emphasis added).

166. 927 F.3d 1306, 1319 (Fed. Cir. 2019).

167. 955 F.3d 1358, 1373 (Fed. Cir. 2020).

168. *Id.* at 1361-62.

abstract idea, and instead provided an “improved cardiac monitoring device.”¹⁶⁹ The majority explained that the “written description confirms our conclusion,” and held that the “district court erred by disregarding the written description’s recitation of the advantages of the claimed invention.”¹⁷⁰ The majority further held that “step one of the *Alice* framework does not require an evaluation of the prior art or facts outside of the intrinsic record regarding the state of the art at the time of invention,” and that such “comparison of the prior art and the claims” were “reserve[d] for §§ 102 and 103 purposes.”¹⁷¹ The majority, however, stated that “we do not hold today that it is impermissible for courts” to consider such extrinsic evidence, but rather that “[i]t is within the trial court’s discretion whether to take judicial notice of a longstanding practice where there is no evidence of such practice in the intrinsic record.”¹⁷²

Judge Dyk concurred in the result, but dissented as to what he believed went “beyond th[at] simple resolution”—namely, the “majority’s . . . dicta” that “seems to suggest undefined limits on the use of extrinsic evidence to determine whether a practice was longstanding in the prior art at the time of invention.”¹⁷³ As an initial matter, Judge Dyk noted that the parties actually agreed that “the prior art was relevant,” and that “[n]either party argued that extrinsic evidence of the prior art is irrelevant to determining whether a practice is longstanding.”¹⁷⁴ Judge Dyk warned that, in any event, “any limitation on the use of extrinsic evidence” in the “step one analysis” “would be inconsistent with binding authority,” and that the “panel opinion is likely to sow confusion for both the district court and the bar.”¹⁷⁵

Uniloc—Express Recitation of Inventive Concept or Improvement.

The Federal Circuit in *Uniloc USA, Inc. v. LG Electronics USA, Inc.*, held that “[c]laims need not” “expressly” “articulate the advantages” that confer patent eligibility.¹⁷⁶ The district court had granted dismissal on the basis that the claims at issue, which were directed to a communications system comprising a “primary station” and “at least one secondary station”

169. *Id.* at 1368.

170. *Id.* at 1368, 1371.

171. *Id.* at 1373-74.

172. *Id.* at 1373.

173. *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1375-76 (Fed. Cir. 2020) (Dyk, J., concurring-in-part, dissenting-in-part).

174. *Id.* at 1376.

175. *Id.* at 1377, 1379.

176. 957 F.3d 1303, 1309 (Fed. Cir. 2020).

“for broadcasting a series of inquiry messages,” were ineligible.¹⁷⁷ The Federal Circuit reversed that judgment, and agreed with the patentee that, at Step One, the claims were not directed to an abstract idea but rather to a “patent-eligible improvement to computer functionality, namely the reduction of latency experienced by parked secondary stations in communication systems.”¹⁷⁸ The defendant did not dispute that “reducing latency” was an improvement, but argued that the claims were not “sufficiently directed to this purported improvement.”¹⁷⁹ The Federal Circuit rejected the argument, holding that the improvement in reduced latency was the result of the “claimed system,” and that the “claims themselves” did not need to “expressly mention the reduced latency” for patent eligibility.¹⁸⁰

Federal Circuit Judges’ Votes on Patent Eligibility

As part of our analysis, we have tracked all of the current Federal Circuit judges’ votes in written patent-eligibility panel decisions since *Alice*. A chart of those votes as of June 19, 2020 is included with this publication as Appendix B. Judge Moore, Chief Judge Prost, and Judge Reyna are the most prolific authors of Section 101 opinions (16, 14, and 13, respectively). Judge Moore has sat on a panel for the most number of cases in which a written Section 101 opinion was issued (36). Other Federal Circuit judges who have been involved in numerous Section 101 opinions are Chief Judge Prost, Judge Reyna, and Judge Wallach (each with 35), and Judges Lourie and Stoll (each with 32). Neither Judge Mayer nor Judge Schall has ever voted in favor of patent eligibility. Chief Judge Prost and Judge Clevenger have voted in favor of eligibility only once. Judges Plager, Lourie, and Linn each have voted in favor of eligibility only twice, Judges Bryson and Chen have done so in only three cases, and Judges Dyk and Hughes have done so in only four cases. On the other hand, Judges Moore (12), Stoll (11), O’Malley (7), and Wallach (7) each have voted in favor of eligibility in a number of cases. We leave it to the reader to decide what conclusions, if any, are to be drawn from the data in this chart.

177. *Id.* at 1305-06.

178. *Id.* at 1307.

179. *Id.* at 1308.

180. *Id.* at 1309.

Efforts to Clarify or Change the Law on Patent Eligibility

Some post-*Alice* legal developments reflect concerns about the number of patent claims that have been held ineligible under Section 101. As discussed above, the Federal Circuit continues its common-law approach to developing the *Mayo-Alice* two-step framework, which some commentators have criticized as lacking clarity. For instance, *Alice* has been criticized for “the havoc wrought” by its “unworkable two-part patent eligibility test based on vaguely defined and nebulous [a]bstract idea[s] and significantly more constructs.”¹⁸¹ Also as discussed above, several of the Federal Circuit judges themselves have expressed frustration with the application of this two-step framework to technological and medical developments like diagnostic methods, which they fear may result in underprotection of some groundbreaking inventions.

Since *Alice*, cases involving patent eligibility have more often than not resulted in a determination of ineligibility, at both the trial and appellate court levels. There have been over 300 decisions in which district courts and the Patent Trial and Appeal Board have held patent claims ineligible on the basis that they amount to abstract ideas implemented on generic computers.¹⁸² Nearly 150 decisions held patent claims ineligible because they are directed to other types of abstract ideas, including methods of organizing human activities, fundamental economic practices, mathematical formulas, and mental processes, or to laws of nature.¹⁸³

These concerns about the underprotection of patents, however, may also be overblown, as patent eligibility still only amounts to a small fraction of all patent litigation. Since *Alice*, over 25,000 patent proceedings have been instituted, yet there are only a few hundred written decisions on patent eligibility.¹⁸⁴ And only 134 of these have resulted in written Federal Circuit decisions on the issue.¹⁸⁵ During the same period, the Federal Circuit has held as many, and possibly more, patent claims invalid as obvious under 35 U.S.C. § 103 as it has ruled ineligible under Section 101. Yet no one is clamoring for legislation on obviousness.

Nevertheless, these concerns have prompted efforts by the PTO and the Legislature to reform. For instance, since the Supreme Court’s decision

181. Babak Nouri, *A Realistic Perspective on Post-Alice Software Patent Eligibility*, IP WATCHDOG (Oct. 14, 2018, 11:05 AM), <https://www.ipwatchdog.com/2018/10/14/realistic-perspective-post-alice-software-patent-eligibility/id=101977/>.

182. See Appendix A.

183. *Decoding Patent Eligibility Post-Alice*, FENWICK & WEST LLP (May 28, 2020, 7:04 PM), <https://www.fenwick.com/Pages/post-alice.aspx>.

184. See Appendix A.

185. See Appendix A.

in *Alice*, the PTO has issued several memoranda providing examples and guidance explaining its approach to evaluating claims for patent eligibility. The PTO issued its most recent guidance in January 2019 (and a further update in October 2019).¹⁸⁶ In that January 2019 guidance, the PTO “extract[ed] and synthesiz[ed] key concepts identified by the courts as abstract ideas” and grouped them into the following categories: mathematical concepts, methods of organizing human activity (i.e., “fundamental economic practices,” “commercial and legal interactions,” and “managing personal behavior”), and mental processes.¹⁸⁷ The guidance stated that it would be a “rare circumstance” for a claim limitation to be “treated as reciting an abstract idea” if it did “not fall within [these] enumerated groupings.”¹⁸⁸ The guidance further explained that, in evaluating patent eligibility at Step One of the two-step framework, “if a claim recites a judicial exception (a law of nature, a natural phenomenon, or an abstract idea),” it is nevertheless patent-eligible “if the claim as a whole integrates the recited judicial exception into a practical application of that exception.”¹⁸⁹ The guidance noted that this clarification “incorporate[d] certain considerations that have been applied by the courts at” both “step one and at step two of the *Alice/Mayo* framework.”¹⁹⁰

In April 2020, the PTO’s Office of the Chief Economist released a study showing that, in the one year since the PTO’s January 2019 guidance, the chances of a Section 101 rejection during prosecution decreased by 25%.¹⁹¹ The report noted that, previously, in the 18 months following *Alice*, the likelihood of receiving a first office action with a Section 101 rejection had increased by 31% in “*Alice*-affected technology areas.”¹⁹² The report concluded that the PTO’s guidance and other memoranda “reversed the upward trend in subject matter eligibility rejections” and “decreased uncertainty in patent examination.”¹⁹³

Separate from the PTO’s own guidance and memoranda, others dissatisfied with the current state of patent-eligibility case law have focused

186. 2019 Revised Patent Subject Matter Eligibility Guidance (USPTO), 84 Fed. Reg. 50, 50 (Jan. 7, 2019); October 2019 Patent Eligibility Guidance Update (USPTO), 84 Fed. Reg. 55942, 55943 (Oct. 18, 2019).

187. 84 Fed. Reg. at 50, 52.

188. *Id.* at 54.

189. *Id.* at 53.

190. *Id.*

191. Andrew A. Toole, *Adjusting to Alice: USPTO Patent Examination Outcomes After Alice Corp. v. CLS Bank International*, OFFICE OF THE CHIEF ECONOMIST IP DATA HIGHLIGHTS 1, 1 (Apr. 23, 2020), https://www.uspto.gov/sites/default/files/documents/OCE-DH_AdjustingtoAlice.pdf.

192. *Id.*

193. *Id.* at 5-6.

their attention on legislation. In the last Congress, several bills were introduced with regard to patent eligibility. The Restoring America's Leadership in Innovation Act of 2018, for instance, condemned "several decisions of the Supreme Court" for impeding "the progress of Science and the useful Arts by eroding the strength and value of the patent system."¹⁹⁴ The Act clarified that an invention is patent-ineligible under Section 101 if it "exists in nature independently of and prior to any human activity, or exists solely in the human mind."¹⁹⁵ The Act also stated that "this amendment effectively abrogates *Alice*."¹⁹⁶

Another proposed reform, still in the drafting phase, would eliminate "implicit or other judicially created exceptions to subject matter eligibility, including 'abstract ideas,' 'laws of nature,' or 'natural phenomena'" as criteria "used to determine patent eligibility under section 101, stating that . . . all cases establishing or interpreting those exceptions to eligibility are hereby abrogated."¹⁹⁷ Instead, the reform would require judges to determine patent eligibility under Section 101 without regard to the state of the art or whether individual limitations of the claim are well known.¹⁹⁸ Critics of this proposal warn that it will lead to the overprotection of so-called inventions.¹⁹⁹ They argue that the *Mayo-Alice* framework helps small businesses and large corporations fight against non-practicing entities ("NPEs").²⁰⁰ This bill, they contend, would by contrast expand the availability of business method patents favored by NPEs.²⁰¹ They also warn that overturning *Myriad* could lead to patents on human genes.²⁰²

It remains unclear how much impact these efforts will ultimately have on the law of patent eligibility. The Federal Circuit, for instance, has made clear that it is "not . . . bound by the" PTO's "[g]uidance, which cannot

194. Restoring America's Leadership in Innovation Act, H.R. Res. 6264, 115th Cong. § 2(1) (2018) (enacted).

195. *Id.* § 7(a).

196. *Id.* § 7(b)(3).

197. Thom Tillis, *Sens. Tillis and Coons and Reps. Collins, Johnson, and Stivers Release Draft Bill Text to Reform Section 101 of the Patent Act*, THOM TILLIS PRESS RELEASES (May 22, 2019, 12:00 AM), <https://www.tillis.senate.gov/2019/5/sens-tillis-and-coons-and-reps-collins-johnson-and-stivers-release-draft-bill-text-to-reform-section-101-of-the-patent-act>.

198. *Id.*

199. Joe Mullin, *Experts Warn Congress: Proposed Changes to Patent Law Would Thwart Innovation*, ELECTRONIC FRONTIER FOUNDATION (June 12, 2019, 3:35 PM), <https://www.eff.org/deeplinks/2019/06/it-should-be-clear-now-messing-patent-laws-section-101-bad-idea>.

200. *Id.*

201. *Id.*

202. *Coalition Letter to Sens. Coons and Tills and Reps. Collins, Johnson, and Stivers*, ACLU (June 3, 2019), https://www.aclu.org/sites/default/files/field_document/2019-06-03_coalition_letter_opposing_draft_legislation_of_section_101_of_patent_act_updated.pdf.

modify or supplant the Supreme Court’s law regarding patent eligibility, or our interpretation and application thereof.”²⁰³ In addition, at this time, congressional intervention seems unlikely. And even if Congress does pass legislation, history teaches that the Supreme Court likes to keep a hand on the throttle of innovation. If the Court thinks too many patents are being granted, it develops more rigorous Section 101 standards. The Justices have decided that business methods, diagnostic methods, genes, and computer-implemented methods should generally not be patented. Although the *Mayo-Alice* framework is, according to critics, too underprotective in pursuit of these ends, it is doubtful that it will be legislatively modified or judicially overturned anytime soon.

CONCLUSION

The Supreme Court, since *Alice*, has consistently denied petitions presenting Section 101 issues. The Court’s latest round of denials came at the outset of 2020 and made it clear that the Justices have no interest in taking up the question of patent eligibility any time soon. On January 13, 2020, the Justices denied all five pending petitions raising the issue, including in *Athena*, *Vanda*, and *Berkheimer*—all cases that have attracted considerable attention from both the Federal Circuit and the bar. Just two weeks later, on January 27, 2020, the Court denied three more petitions concerning eligibility. To date, the Court has not granted certiorari in any other Section 101 case. Thus, there is little prospect of any major substantive changes to Section 101 from the Supreme Court in the near future.

The Supreme Court has developed the exceptions to patentability and pronounced a two-part framework to determine whether particular claims fall within those exceptions. Since then, the Federal Circuit has developed a robust body of Section 101 case law applying that framework that, while not answering every question, provides meaningful guidance to district courts, litigants, and the PTO.

Alice, in short, is coming of age.

203. In re Rudy, 956 F.3d 1379, 1383 (Fed. Cir. 2020).

APPENDIX A

CHART OF POST-ALICE CASES
(as of June 19, 2020)

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I. CLAIMS INELIGIBLE UNDER ALICE¹

A. Software/Tech Patents

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<i>Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.</i> , 758 F.3d 1344 (Fed. Cir. 2014)	07/11/2014	No petition found	No petition found	Affirming the district court’s grant of summary judgment on the basis that the asserted device profile patent claims were ineligible. Held that a “device profile” within a digital image processing system “is not a tangible or physical thing” and thus does not fall within any of the categories of eligible subject matter.
<i>I/P Engine, Inc. v. AOL Inc.</i> , 576 F. App’x 982 (Fed. Cir. 2014) (non-precedential)	08/15/2014	12/15/2014 (denied)	10/05/2015 (denied)	The majority held that the asserted claims, which related to a method of filtering Internet search results, were invalid as obvious. The majority did not address the issue of eligibility. However, Judge Mayer wrote in his concurrence that he would have also held that the claims were ineligible.
<i>Planet Bingo, LLC v. VKGS, LLC</i> , 576 F. App’x 1005 (Fed. Cir. 2014) (non-precedential)	08/26/2014	No petition found	No petition found	Affirming the district court’s grant of summary judgment on the basis that the asserted patent claims reciting “computer-aided methods and systems for managing the game of bingo” were

¹ *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208 (June 19, 2014).

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				ineligible. Held that the claims were directed to the abstract idea of managing/playing a game of bingo, with no inventive concept.
<i>buySAFE, Inc. v. Google, Inc.</i> , 765 F.3d 1350 (Fed. Cir. 2014)	09/03/2014	No petition found	No petition found	Affirming the district court’s grant of judgment on the pleadings on the basis that the asserted claims, which recited “methods and machine-readable media encoded to perform steps for guaranteeing a party’s performance of its online transaction,” were ineligible. Held that the claims were directed to the abstract idea of a “transaction performance guaranty,” with no inventive concept.
<i>Ultramercial, Inc. v. Hulu, LLC</i> , 772 F.3d 709 (Fed. Cir. 2014)	11/14/2014	02/20/2015 (denied)	06/30/2015 (denied)	Affirming the district court’s grant of dismissal on the basis that the asserted claims, which recited a method of distributing copyrighted materials over the Internet, were ineligible. Held that the claims were directed to the abstract idea of showing an advertisement before delivering free content. Further held that the recitation of “conventional steps, specified at a high level of generality” was “insufficient to supply an ‘inventive concept’” necessary to confer eligibility.

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<p><i>Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n</i>, 776 F.3d 1343 (Fed. Cir. 2014)</p>	<p>12/23/2014</p>	<p>03/12/2015 (denied)</p>	<p>10/05/2015 (denied)</p>	<p>Affirming the district court’s grant of dismissal on the basis that the asserted claims, which recited a method of extracting data from hard copy documents using a scanner, recognizing information, and storing the information, were ineligible. Held that the claims were directed to the abstract idea of “1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory.” Held that the claims lacked an inventive concept because the “use of a scanner or other digitizing device to extract data from a document was well-known at the time of filing, as was the ability of computers to translate the shapes of a physical page into typeface characters.”</p>

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<i>Allvoice Developments US, LLC v. Microsoft Corp.</i> , 612 F. App'x 1009 (Fed. Cir. 2015) (non-precedential)	05/22/2015	07/27/2015 (denied)	12/14/2015 (denied)	Affirming the district court's grant of summary judgment on the basis that the asserted speech recognition product patent claims were ineligible. Held that the claims merely recited "software instructions without any hardware limitations."
<i>OIP Technologies, Inc. v. Amazon.com, Inc.</i> , 788 F.3d 1359 (Fed. Cir. 2015)	06/11/2015	08/13/2015 (denied)	12/14/2015 (denied)	Affirming the district court's grant of dismissal on the basis that the asserted claims, which related to a price-optimization method, were ineligible. Held that the claims were directed to the abstract concept of offer-based price optimization, with no inventive concept. Judge Mayer concurred, supporting the district court's Section 101 determination on a motion to dismiss.
<i>Internet Patents Corp. v. Active Network, Inc.</i> , 790 F.3d 1343 (Fed. Cir. 2015)	06/23/2015	No petition found	No petition found	Affirming the grant of dismissal of claims as ineligible, finding that they were directed to the abstract idea of retaining information in the navigation of online forms, with no inventive concept. Also stated that "pragmatic analysis of § 101 is facilitated by considerations analogous to those of §§ 102 and 103 as applied to the particular case."

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<i>Intellectual Ventures I LLC v. Capital One Bank (USA)</i> , 792 F.3d 1363 (Fed. Cir. 2015)	07/06/2015	No petition found	No petition found	Affirming the district court’s grant of summary judgment on the basis that the asserted claims were ineligible. Held that certain claims were directed to the abstract idea of tracking financial transactions to determine whether they exceed a pre-set spending limit, with no inventive concept. Held that certain other claims were directed to the abstract idea of tailoring information on a website based on the time of day of viewing, with no inventive concept. The opinion limited the holding of <i>DDR Holdings</i> , stating that <i>DDR Holdings</i> only stated that the claims at issue were eligible because they “(1) did not foreclose other ways of solving the problem, and (2) recited a specific series of steps that resulted in a departure from the routine and conventional sequence of events after the click of a hyperlink advertisement.”
<i>Vehicle Intelligence & Safety LLC v. Mercedes-Benz USA, LLC</i> , 635 F. App’x 914 (Fed. Cir. 2015) (non-precedential)	12/28/2015	No petition found	05/31/2016 (denied)	Affirming the district court’s grant of judgment on the pleadings on the basis that claims directed to testing vehicle operators for impairment (i.e., intoxication), and then taking control of the vehicle if impairment is detected, were ineligible. Held that the claims were directed to the abstract idea of

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				testing operators of any kind of moving equipment for any kind of physical or mental impairment. Further held that the claims lacked inventive concept, as the claims “merely state the abstract idea ... using an unspecified ‘expert system’ running on equipment that already exists in various vehicles.” Also distinguished the case from <i>DDR Holdings</i> , stating that the “claims at issue are not ‘necessarily rooted in computer technology to overcome a problem specifically arising in the realm of computer networks’” and the claims “do not recite faster, more accurate and reliable impairment testing than what was known in the prior art.”
<i>Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.</i> , 811 F.3d 1314 (Fed. Cir. 2016)	01/20/2016	No petition found	No petition found	Affirming the district court’s grant of summary judgment on the basis that the asserted claims, which directed to systems and methods for assisting borrowers to obtain loans, were ineligible. Held that the claims were directed to the abstract idea of “anonymous loan shopping.” Further held that the claims lacked an inventive concept, as the claims “add” only generic computer components such as an “interface,” “network,” and “database.”

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<i>In re TLI Communications LLC Patent Litigation</i> , 823 F.3d 607 (Fed. Cir. 2016)	05/17/2016	No petition found	No petition found	Affirming the district court’s grant of motion to dismiss on the basis of ineligibility of asserted claims directed to taking, transmitting, and organizing digital images. Held that the claims were directed to the abstract idea of classifying an image and storing the image based on classification. Found that the claims did not recite an improvement to computer functioning. Also held that the claims lacked an inventive concept, as the computer components used to apply the abstract idea, such as the telephone unit and server, acted in their routine manner.
<i>Shortridge v. Foundation Constr. Payroll Serv., LLC</i> , 655 F. App’x 848 (Fed. Cir. 2016) (non-precedential)	07/13/2016	No petition found	No petition found	Affirming the district court’s grant of judgment on the pleadings on the basis that the asserted payroll processing claims were ineligible. Held that, as the patentee conceded, the claims are directed to the abstract idea of “cataloging labor data.” Held that the claims lacked an inventive concept because they merely applied the abstract idea with generic computer components, such as “relational databases.”
<i>LendingTree, LLC v. Zillow, Inc.</i> , 656 F. App’x 991 (Fed. Cir. 2016) (non-precedential)	07/25/2016	No petition found	No petition found	Reversing the district court’s denial of summary judgment on the basis of ineligibility. Held that the claims

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				directed to “a process for coordinating loans on a loan processing computer over the Internet” covered the abstract idea of “a loan-application clearinghouse.” Held that the claims lacked an inventive concept because they involved only generic computer functions.
<i>Elec. Power Grp., LLC v. Alstom S.A.</i> , 830 F.3d 1350 (Fed. Cir. 2016)	08/01/2016	09/01/2016 (denied)	No petition found	Affirmed the district court’s grant of summary judgment on the basis that the asserted claims covering systems and methods for “performing real-time performance monitoring of an electric power grid” were ineligible. Held that the claims were directed to the abstract idea of “collecting information, analyzing it, and displaying certain results of the collection and analysis.” Held that the claims lacked an inventive concept because they required only “conventional, generic technology.”
<i>TDE Petroleum Data Solutions, Inc. v. AKM Enterprise, Inc.</i> , 657 F. App’x 991 (Fed. Cir. 2016) (non-precedential)	08/15/2016	09/13/2016 (denied)	01/13/2017 (denied)	Affirmed the district court’s grant of judgment on the pleadings on the basis that the asserted sensor data processing patent claims were ineligible. Held that the claims were directed to the abstract idea of “storing, gathering, and analyzing data.” Held that the claims lacked an

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				inventive concept because they recited only generic computer functions.
<i>Affinity Labs of Texas, LLC v. Amazon.com, Inc.</i> , 838 F.3d 1266 (Fed. Cir. 2016)	09/23/2016	10/24/2016 (denied)	02/28/2017 (denied)	Affirming the district court's entry of judgment on the pleadings on the basis that the asserted media content delivery patent claims were ineligible. Held that the claims were directed to the abstract idea of "delivering user-selected media content to portable devices." Held that the claims lacked an inventive concept because the claims were not directed to the solution of a "technological problem," and effected no "improvement in computer or network functionality."
<i>Affinity Labs of Texas, LLC v. DirecTV, LLC</i> , 838 F.3d 1253 (Fed. Cir. 2016)	09/23/2016	10/24/2016 (denied)	02/27/2017 (denied)	Affirming the district court's dismissal on the basis that the asserted broadcast signal streaming patent claims were ineligible. Held that the claims were directed to the abstract idea of "out-of-region delivery of regional broadcasting." Held that the claims lacked an inventive concept because they merely required the use of generic features of cellular telephones and routine functions.
<i>Intellectual Ventures I v. Symantec Corp.</i> , 838 F.3d 1307 (Fed. Cir. 2016)	09/30/2016	11/16/2016 (denied)	No petition found	Affirming the district court's grant of summary judgment on the basis that the asserted claims were ineligible. For

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				instance, held that certain claims were directed to the abstract idea of filtering e-mails that have unwanted content, with no inventive concept.
<i>FairWarning IP, LLC v. Iatric Systems, Inc.</i> , 839 F.3d 1089 (Fed. Cir. 2016)	10/11/2016	No petition found	No petition found	Affirming the district court’s dismissal with prejudice on the basis that the asserted claims were ineligible. Held that the claims, which recited systems and methods for fraud and misuse detection of a patient’s health information on a computer, were directed to the abstract idea of collecting and analyzing information to detect misuse. Held that the claims lacked an inventive concept, as they required only generic computer components. Found that the claims merely “implement an old practice in a new environment.”
<i>Synopsys, Inc. v. Mentor Graphics Corp.</i> , 839 F.3d 1138 (Fed. Cir. 2016)	10/17/2016	11/16/2016 (denied)	04/28/2017 (denied)	Affirming grant of summary judgment on the basis that the asserted logic circuit patent claims were ineligible. Held that the claims were directed to the abstract idea of “translating a functional description of a logic circuit into a hardware component description of the logic circuit.” Held that the claims lacked an inventive concept, as they provide no technical solution to a problem.

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<i>Tranxition, Inc. v. Lenovo (United States) Inc.</i> , 664 F. App'x 968 (Fed. Cir. 2016) (non-precedential)	11/16/2016	01/03/2017 (denied)	No petition found	Affirming grant of summary judgment on the basis that the asserted manual migration claims were ineligible. Held that the claims, which recited methods of transferring or “migrating” configuration settings between computers, were directed to the abstract idea of “manual migration.” Held that the claims lacked an inventive concept because they required only generic computer components functioning in their conventional manner.
<i>Smartflash LLC v. Apple Inc.</i> , 680 F. App'x 977 (Fed. Cir. 2017) (non-precedential)	03/01/2017	04/14/2017 (denied)	11/09/2017 (denied)	Reversing the district court’s denial of judgment as a matter of law on the basis that the asserted data storage and access patent claims were ineligible. Held that the claims were directed to the abstract idea of “conditioning and controlling access to data based on payment.” Held that the claims lacked an inventive concept because they recited “routine computer activities” and were like the claims in <i>Ultramercial</i> , which also provided access to content with routine steps. Also held that an “advantage” is not the standard for eligibility.
<i>Intellectual Ventures v. Capital One Financial Corp.</i> ,	03/07/2017	No petition found	No petition found	Affirming the district court’s grant of summary judgment on the basis that the

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
850 F.3d 1332 (Fed. Cir. 2017)				asserted XML management patent claims were ineligible. Held that the claims were directed to the abstract idea of “collecting, displaying, and manipulating data of particular documents.” Held that the claims lacked an inventive concept because they recited generic computer elements that “merely restate their individual functions,” and failed to “unconventionally improve a technological process.”
<i>Clarilogic, Inc. v. Formfree Holdings Corp.</i> , 681 F. App’x 950 (Fed. Cir. 2017) (non-precedential)	03/15/2017	No petition found	No petition found	Affirming the district court’s grant of summary judgment on the basis that the asserted electronic certification patent claims were ineligible. Held that the claims are directed to the abstract idea of “gathering financial information of potential borrowers.” Held that the claims lacked an inventive concept because they did not recite how data was transformed in any way, despite taking in financial data and outputting a report. Instead, the patent failed to claim “the technical manner in which financial data is gathered, analyzed, or output.”
<i>Coffelt v. NVidia Corp.</i> , 680 F. App’x 1010 (Fed. Cir. 2017) (non-precedential)	03/15/2017	No petition found	04/04/2017 (denied)	Affirming the district court’s dismissal on the basis that the asserted claims—reciting a method for deriving a pixel

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				color in a graphic image—were ineligible. Held that the claims were directed to the abstract idea of “calculating and comparing regions in space.” Held that the claims lacked an inventive concept because they merely recited a generic computer functioning in a conventional manner.
<i>Mentor Graphics Corp. v. Eve-USA, Inc.</i> , 851 F.3d 1275 (Fed. Cir. 2017)	03/16/2017	05/01/2017 (denied)	11/30/2017 (dismissed via stipulation)	Affirming the district court’s grant of summary judgment on the basis that the asserted simulation/emulation technology patent claims were ineligible. Held that the claims cover carrier wave signals, which did not transform the signal itself.
<i>Intellectual Ventures I LLC v. Erie Indemnity Co.</i> , 850 F.3d 1315 (Fed. Cir. 2017)	03/17/2017	No petition found	No petition found	Affirming the district court’s dismissal on the basis that the asserted claims reciting the use of an index to locate desired information in a computer database. Held that the claims were directed to the abstract idea of “creating an index and using that index to search for and retrieve data.” Held that the claims lacked an inventive concept because they recited only routine computer functions. Held that the claims were not like those in <i>Bascom</i> , because they did not sufficiently recite how the

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				inclusion of “XML tags or metadata leads to an improvement in computer database technology.” Also held that claims directed to a “mobile interface” on a user’s device were directed to the abstract idea of “remotely accessing user specific information,” and lacked an inventive concept because they recited nothing more than “generic computer implementation.”
<i>West View Res., LLC v. Audi AG</i> , 685 F. App’x 923 (Fed. Cir. 2017) (non-precedential)	04/19/2017	No petition found	No petition found	Affirming the district court’s grant of judgment on the pleadings on the basis that the asserted claims reciting the collection, organization, and display of information were ineligible. Held that the claims were directed to the abstract idea of “receiving or collecting data queries, analyzing the data query, retrieving and processing the information constituting a response to the initial data query, and generating a visual or audio response to the initial data query.” Held that the claims lacked an inventive concept because, although the specification discloses “many different arrangements,” they were arrangements of generic components.

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<i>RecogniCorp, LLC v. Nintendo Co., Ltd.</i> , 855 F.3d 1322 (Fed. Cir. 2017)	04/28/2017	05/30/2017 (denied)	11/01/2017 (denied)	Affirming the district court’s grant of judgment on the pleadings on the basis that the asserted patent claims, which recited a method and apparatus for building a composite facial image using constituent parts, were ineligible. Held that the claims were directed to the abstract idea of encoding and decoding image data. Held that the “addition of a mathematical equation that simply changes the data into other forms of data” did not confer inventive concept, and instead merely “take[s] an abstract idea and appl[ies] it with a computer.”
<i>EasyWeb Innovations, LLC v. Twitter, Inc.</i> , 689 F. App’x 969 (Fed. Cir. 2017) (non-precedential)	05/12/2017	No petition found	No petition found	Affirming the district court’s grant of summary judgment on the basis that the asserted message publishing system patent claims were ineligible. Held that the claims were directed to the abstract idea of “receiving, authenticating, and publishing data.” Held that the claims lacked an inventive concept because the claimed abstract idea was merely “executed using computer technology.”
<i>Prism Technologies LLC v. T-Mobile USA, Inc.</i> , 696 F. App’x 1014 (Fed. Cir. 2017) (non-precedential)	06/23/2017	07/14/2017 (denied)	11/09/2017 (denied)	Reversing the district court’s denial of judgment as a matter of the law on the basis that the asserted security systems patent claims were patent-eligible. Held

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				that the claims were directed to the abstract idea of providing restricted access to resources. Held that the claims lacked an inventive concept because the patents themselves “demonstrate the conventional nature of the[] hardware identifiers,” and there was “no indication that their inclusion produce[d] ‘a result that overrides the routine and conventional’ use of this known function.”
<i>Secured Mail Solutions LLC v. Universal Wilde, Inc.</i> , 873 F.3d 905 (Fed. Cir. 2017)	10/16/2017	No petition found	01/16/2018 (denied)	Affirming the district court’s dismissal on the basis that the asserted patent claims relating to affixing an identifier on the outer surface of a mail object before it is sent were ineligible. Held that the claims were directed to the abstract idea of “using a marking affixed to the outside of a mail object to communicate information about the mail object.” Held that the claims lacked an inventive concept, as they only required generic technology to carry out the abstract idea. Noted that the “claim language does not explain how the sender generates the information, only that the information itself is unique or new. The claim language does not provide any specific showing of what is inventive about the

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				identifier or about the technology used to generate and process it.”
<i>Smart Sys. Innovations, LLC v. Chicago Transit Authority</i> , 873 F.3d 1364 (Fed. Cir. 2017)	10/18/2017	12/01/2017 (denied)	No petition found	<p>Affirming the district court’s grant of judgment on the pleadings that the asserted claims were ineligible. The claims were generally related to the inventions “designed to implement open-payment fare systems in mass transit networks.” Held that the claims were directed to abstract ideas: the “collection, storage, and recognition of data,” with no inventive concept. Held that unlike the claims in <i>DDR Holdings</i> and <i>Enfish</i>, the claims are not “directed to an improvement in computer technology,” and unlike the claims in <i>McRO</i>, the claims are “not directed to a combined order of specific rules that improve any technological process, but rather invoke computers in the collection and arrangement of data.” Also held that “when a patent’s claims ‘disclose patent [i]neligible subject matter[,] . . . preemption concerns are fully addressed and made moot.”</p> <p>Judge Linn dissented as to the claims of two patents. Judge Linn stated that the focus of the claims is a “combination” that “overcame the latency and</p>

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				connectivity issues that previously precluded the practical use of a bankcard to regulate mass transit.” Judge Linn stated that these claims were “not directed to one of the categories of invention that the Supreme Court and this court have deemed particularly suspect.”
<i>Two-Way Media Ltd. v. Comcast Cable Communications, LLC</i> , 874 F.3d 1329 (Fed. Cir. 2017)	11/01/2017	12/22/2017 (denied)	07/27/2018 (denied)	Affirmed the district court’s grant of judgment on the pleadings on the basis that the asserted claims, which covered streaming audio/visual data over the Internet, were ineligible. Held that the claims were directed to the abstract idea of sending information, directing the sent information, monitoring receipt of the sent information, and accumulating records about receipt of the sent information. Held that the claims lacked an inventive concept even if they solved some technical problems, as the claim <i>language</i> only required generic technology functioning in its conventional manner to achieve such a goal.
<i>Intellectual Ventures I LLC v. Erie Indemnity Co.</i> , 711 F. App’x 1012 (Fed. Cir. 2017) (non-precedential)	11/03/2017	No petition found	No petition found	Affirming the district court’s dismissal on the basis that the asserted claims, which covered a system and method for recognizing errant files, were ineligible.

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				Held that the claims were directed to the abstract idea of “identifying and categorizing illicit files, the possession of which might subject an individual or organization to liability.” Held that the claims lacked an inventive concept, as they merely carried out the abstract idea using generic computer components functioning in their routine and conventional manner.
<i>Move, Inc. v. Real Estate Alliance Ltd.</i> , 721 F. App’x 950 (Fed. Cir. 2018) (non-precedential)	02/01/2018	02/28/2018 (denied)	08/24/2018 (denied)	Affirming the district court’s grant of summary judgment on the basis that the asserted claims were ineligible. The claims recited a method for searching real estate properties geographically on a computer. Held that the claims were directed to the abstract idea of “a method for collecting and organizing information about available real estate properties and displaying this information on a digital map that can be manipulated by the user.” Held that the claims lacked an inventive concept because they only recited generic computer components and features functioning in their routine manner.
<i>Berkheimer v. HP Inc.</i> , 881 F.3d 1360 (Fed. Cir. 2018)	02/08/2018	03/21/2018 (denied)	09/28/2018 (pending)	Affirmed in part the district court’s grant of summary judgment on the basis that claims reciting “digitally processing and

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				<p>archiving files in a digital asset management system” were ineligible. Held that the claims were directed to the abstract idea of “of parsing, comparing, and storing data.” Held that “[w]hile patent eligibility is ultimately a question of law, the district court erred in concluding there are no underlying factual questions to the § 101 inquiry.” Held that some claims lacked an inventive concept because they failed to provide an improvement to the existing technology. However, remanded to the district court as to other claims, finding that there was a question of fact as to whether they provided an inventive concept.</p>
<p><i>Automated Tracking Sols., LLC v. The Coca-Cola Co.</i>, 723 F. App’x 989 (Fed. Cir. 2018) (non-precedential)</p>	<p>02/16/2018</p>	<p>No petition found</p>	<p>No petition found</p>	<p>Affirming the district court’s grant of judgment on the pleadings on the basis that the asserted inventory control patent claims were ineligible. Held that the claims were directed to the abstract idea of collecting data from sensors, analyzing that data, and determining results based on the analysis of the data. Held that the claims lacked an inventive concept, as they recited only generic computer components to carry out the abstract idea.</p>

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<i>Intellectual Ventures I LLC v. Symantec Corp.</i> , 725 F. App'x 976 (Fed. Cir. 2018) (non-precedential)	03/15/2018	No petition found	No petition found	Affirming the district court's grant of summary judgment on the basis that the asserted data-backup claims were ineligible. Held that the claims were directed to the abstract idea of "backing up data," with no inventive concept. Specifically held that <i>Berkheimer</i> did "not compel a different conclusion," as the specification in this case confirmed that the individual components were conventional, generic, and operated as expected, and the patentee failed to offer evidence that the order of claim steps was unconventional.
<i>Maxon, LLC v. Funai Corp., Inc.</i> , 726 F. App'x 797 (Fed. Cir. 2018) (non-precedential)	04/09/2018	05/03/2018 (denied)	No petition found	Affirming the district court's grant of dismissal on the basis that the asserted claims, which recited "electronic means of increasing user control over subscription entertainment content," were ineligible. Held that the claims are directed to the abstract idea of "decentralized delivery controlled by the owner of a plurality of devices." Held that the claims lacked an inventive concept, as they recited only "generic computing processes using functional language."

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<i>Voter Verified, Inc. v. Election Sys. & Software LLC</i> , 887 F.3d 1376 (Fed. Cir. 2018)	04/20/2018	05/17/2018 (denied)	09/13/2018 (denied)	Affirming the district court’s grant of dismissal on the basis of ineligibility as to the asserted claims, which were directed to methods and systems that provide auto-verification of a voter’s ballot. Held that the claims were directed to the abstract idea of “voting, verifying the vote, and submitting the vote for tabulation.” Further held that the claims lacked an inventive concept because they required only generic computers to carry out the claimed method.
<i>SAP Am., Inc. v. Investpic, LLC</i> , 890 F.3d 1016 (Fed. Cir. 2018) *modified and reissued 08/02/2018	05/15/2018	06/14/2018 (denied)	03/08/2019 (denied)	Affirming the district court’s grant of judgment on the pleadings on the basis of ineligibility of the claims, which were directed to calculating, analyzing, and displaying investment data. Stated that “[l]ike other legal questions based on underlying facts, this question may be, and frequently has been, resolved on a Rule 12(b)(6) or (c) motion where the undisputed facts, considered under the standards required by that Rule, require a holding of ineligibility under the substantive standards of law.” Held that the claims were directed to the abstract idea of “selecting certain information, analyzing it using mathematical techniques, and reporting or displaying

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				<p>the results of the analysis,” with no inventive concept. Explained that the “focus of the claims is not a physical-realm improvement but an improvement in wholly abstract ideas—the selection and mathematical analysis of information.”</p> <p>Further held that, although the patentee’s counsel “contended at oral argument that the inclusion of a ‘parallel processing’ computing architecture in claim 22 should render the claim patent eligible . . . neither the claims nor the specification calls for any parallel processing system different from those available in existing systems.”</p>
<p><i>Burnett v. Panasonic Corp.</i>, 741 F. App’x 777 (Fed. Cir. 2018) (non-precedential)</p>	<p>07/16/2018</p>	<p>No petition found</p>	<p>09/18/2018 (denied)</p>	<p>Affirming dismissal on the basis of ineligibility of claims directed to a geospatial media recorder and geospatial information processing method. Noted that, although the complaint contained factual allegations under step two, the patentee did “not contest that each element of the asserted claims is well-understood, but rather argue[d] that the elements from each claim form new combinations.” Noted also that the patentee submitted extrinsic evidence, “which the Supreme Court has held can</p>

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				<p>give rise to a factual dispute.” Regardless, held that “[n]one of these factual allegations precludes resolution . . . at the pleading stage because [the defendant] does not dispute these allegations, and because we conclude that the asserted claims are patent-ineligible even when accepting the allegations as true.” Held that the claims were directed to the abstract idea “of converting geospatial coordinates into natural numbers,” with generic components.</p>
<p><i>Interval Licensing LLC v. AOL, Inc.</i>, 896 F.3d 1335 (Fed. Cir. 2018)</p>	<p>07/20/2018</p>	<p>No petition found</p>	<p>No petition found</p>	<p>Affirming the district court’s grant of judgment on the pleadings on the basis that the asserted claims to an “attention manager” of a display device were ineligible. Held that the claims were directed to an abstract idea of “displaying a second set of data without interfering with a first set of data.” Held that the claims lacked any inventive concept and instead the “asserted improvement here is the presentation fo information in conjunction with other information,” which was not an improvement “rooted in computer technology.”</p> <p>Judge Plager concurred in the opinion, but dissented in part “from our court’s</p>

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				continued application of this incoherent body of doctrine.”
<p><i>SAP Am., Inc. v. InvestPic, LLC</i>, 898 F.3d 1161 (Fed. Cir. 2018)</p> <p>*modified and reissued opinion (after 5/15/2018 opinion)</p>	08/02/2018	09/04/2018 (denied)	03/08/2019 (denied)	<p>Affirming the district court’s grant of judgment on the pleadings, holding ineligible claims relating to calculating, analyzing, and displaying investment data. Stated that it is not “enough for subject-matter eligibility that claimed techniques be novel and nonobvious in light of prior art, passing muster under 35 U.S.C. §§ 102 and 103.” Held that “[n]o matter how much advance in the finance field the claims recite, the advance lies entirely in the realm of abstract ideas,” and thus “[a]n advance of that nature is ineligible for patenting.” Further stated that “[a]n innovator who makes such an advance lacks patent protection for the advance itself,” but that “[i]f any protection is to be found, the innovator must look outside patent law in search of it, such as in the law of trade secrets, whose core requirement is that the idea be kept secret from the public.”</p> <p>Noted that “[l]ike other legal questions based on underlying facts,” patent eligibility “may be, and frequently has been, resolved on a Rule 12(b)(6) or (c) motion where the undisputed facts . . .</p>

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				<p>require a holding of ineligibility under the substantive standards of law.”</p> <p>Held that the claims were directed to “selecting certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis.” Held that the claims lacked any inventive concept because they “require[d] no improved computer resources InvestPic claims to have invented,” and instead “just already available computers, with their already available basic functions, to use as tools in executing the claimed process.”</p>
<p><i>BSG Tech LLC v. BuySeasons, Inc.</i>, 899 F.3d 1281 (Fed. Cir. Aug. 15, 2018)</p>	<p>08/15/2018</p>	<p>No petition found</p>	<p>No petition found</p>	<p>Affirmed the district court’s grant of summary judgment on the basis that the asserted claims, which were recited a “self-evolving generic index” for organizing information stored in a database, were ineligible. Held that the claims were directed to the abstract idea of “considering historical usage information while inputting data,” with no inventive concept. Held that “It has been clear since <i>Alice</i> that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that</p>

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				ineligible concept.” Thus, an “unconventional feature” does not provide an inventive concept if that feature is the abstract idea itself, or the use thereof.
<i>Data Engine Techs. LLC v. Google LLC</i> , 906 F.3d 999 (Fed. Cir. 2018)	10/09/2018	11/29/2018 (denied)	No petition found	<p>Affirmed in part and reversed in part the district court’s grant of judgment on the pleadings on the basis that the asserted claims, which were directed to systems and methods of making and navigating spreadsheets (“tab claims”), as well as tracking changes made in spreadsheets, were ineligible.</p> <p>Held that the tab claims were not directed to an abstract idea, but rather “to a specific method for navigating through three-dimensional electronic spreadsheets.” This, the court, held, “improve[d] the efficient functioning of computers” by “allow[ing] the user to simply and conveniently ‘flip through’ several pages of [a] notebook to rapidly locate information of interest.” Reiterated that the eligibility “inquiry requires that the claims be read as a whole.”</p> <p>Held that the claims directed to tracking changes in a spreadsheet were ineligible.</p>

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				Held that the claims were directed to the abstract idea of “identifying and storing electronic spreadsheet pages.” Held that the claims lacked an inventive concept because they recited nothing other than “generic steps of creating a base version of a spreadsheet, creating a new version of the spreadsheet, and determining changes made to the original version.”
<i>Glasswall Solutions Ltd. v. Clearswift Ltd.</i> , 754 F. App’x 996 (Fed. Cir. 2018) (non-precedential)	12/20/2018	No petition found	05/17/2019 (denied)	Affirming dismissal on the basis of ineligibility of claims directed to “the filtering of electronic files and data’ by regenerating an electronic file without non-conforming data.” Held that the recited filtering was an abstract idea. Held that the claims lack an inventive concept, as they “simply require ‘generic computer-implemented steps.’” Finally, held that the plaintiff could not “render its complaint immune from dismissal by merely asserting that its methods are ‘novel’ and ‘improve the technology used in electronic communications,’” nor could an expert declaration “of the alleged advantages in the claimed invention,” as these were just “conclusory legal assertions which the district court was ‘not bound to accept as true.’”

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<i>VOIT Techs., LLC v. Del-Ton, Inc.</i> , 757 F. App'x 1000 (Fed. Cir. 2019) (non-precedential)	02/08/2019	No petition found	No petition found	Affirming dismissal on the basis that the asserted claims, which covered a method of “providing secure interactive communication of text and image information,” were ineligible. Held that the claims were directed to the abstract idea of “entering, transmitting, locating, compressing, storing, and displaying data (including text and image data) to facilitate the buying and selling of items,” with no inventive concept.
<i>Univ. of Florida Research Foundation, Inc. v. Gen. Elec. Co.</i> , 916 F.3d 1363 (Fed. Cir. 2019)	02/26/2019	No petition found	No petition found	Affirming dismissal on the basis that the asserted claims, which recited a method and system for “integrat[ing] physiologic data from at least one bedside machine,” were ineligible. Held that the claims were directed to the abstract idea of “collecting, analyzing, manipulating, and displaying data,” with no inventive concept.
<i>ChargePoint, Inc. v. SemaConnect, Inc.</i> , 920 F.3d 759 (Fed. Cir. 2019)	03/28/2019	05/13/2019	10/21/2019 (denied)	Affirming dismissal on the basis that the asserted claims, which were directed to charging stations for electric vehicles, were ineligible. Held that the claims were directed to the abstract idea of “communication over a network for interacting with a device, applied to the

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				<p>context of electric vehicle charging stations,” with no inventive concept.</p> <p>In addition, rejected the patentee’s request to at least allow it to serve an amended complaint, holding that the patentee never sought leave to amend before entry of judgment in the district court.</p>
<p><i>Uniloc USA, Inc. v. ADP, LLC</i>, 772 F. App’x 890 (Fed. Cir. 2019) (non-precedential)</p>	<p>05/24/2019</p>	<p>06/14/2019 (petition for panel rehearing, denied)</p>	<p>No petition found</p>	<p>Affirming in part and reversing in part the district court’s dismissal on the basis of the eligibility of certain claims and ineligibility of certain other claims.</p> <p>Held that certain claims were “directed to the use of file packets with segments configured to initiate centralized registration of an application from an application server.” Although the goal of the claims was “functional: to allow centralized distribution of software,” the Federal Circuit held, claims were directed to an improvement in “<i>how</i> this is done.”</p> <p>Held that other claims were not ineligible because they were “directed to a particular way of using a conventional application server to nevertheless allow on-demand installation of an application incorporating preferences from two different sources by adding the</p>

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				<p>application manager and configuration manager as additions to each application.”</p> <p>Held that other claims were directed to “using a desktop interface to access an application server,” with no inventive concept. Rejected the patentee’s reliance on the allowance of the claims as a basis for eligibility, holding that “mere allowance of claims during prosecution does not preclude dismissal for patent ineligibility.”</p> <p>Held that other claims were directed to “a license management method that indicates a user’s authorization to access an application,” with no inventive concept.</p>
<p><i>Reese v. Sprint Nextel Corp.</i>, 774 F. App’x 656 (Fed. Cir. 2019) (non-precedential)</p>	<p>06/10/2019</p>	<p>07/09/2019 (denied)</p>	<p>11/06/2019 (denied)</p>	<p>Affirming the district court’s grant of summary judgment on the basis that the asserted call waiting and caller ID service patent claims were ineligible. Held that the claims were directed to the abstract idea of “receiving information (a calling phone number flagged as private) and sending an indication (an audible tone) to a party already engaged in a call,” with no inventive concept.</p>

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<i>Innovation Sciences, LLC v. Amazon.com, Inc.</i> , 778 F. App'x 859 (Fed. Cir. 2019) (non-precedential)	07/02/2019	08/01/2019 (denied)	No petition found	Affirming grant of summary judgment on the basis that the asserted claims, which were directed to an online method for a payment server to support online buying over the Internet, were ineligible. Held that the claims were directed to the abstract idea of “securely processing a credit card transaction with a payment server,” with no inventive concept. Rejected the patentee’s argument that there were factual issues making summary judgment determination inappropriate, holding that “[t]he specification admits that merchant servers for carrying out a secure transaction were conventional. Innovation Sciences points to no evidence that disputes this fact. Nor does it specify what facts are purportedly in dispute.”
<i>Bridge and Post, Inc. v. Verizon Commc’ns, Inc.</i> , 778 F. App'x 882 (non-precedential)	07/05/2019	08/19/2019 (denied)	No petition found	Affirming dismissal on the basis that the asserted claims, which were directed to “tracking a user’s computer network activity and using information gained about the user to deliver targeted media,” were ineligible. Held that the claims were directed to “the use of persistent identifiers to implement targeted marketing,” to “communicating

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				<p>information using a personalized marking,” and to “communicating information about a mail . . . object using a personalized marking”—all with no inventive concept.</p> <p>Rejected the patentee’s argument that the district court was required to “cite to” allegations in the complaint, holding that the patentee “failed to explain how any particular factual allegation . . . would create a factual issue preventing resolution of the case as a matter of law.” Further held that the district court was “not required to accept” the patentee’s “legal conclusions as true, even if couched as factual allegations.”</p> <p>Judge Bryson concurred in part and dissented in part, stating that he would have found the claims of one patent patent-eligible because they recited “a specific technique . . . for intercepting, tagging, and forwarding network traffic,” as opposed to being merely “directed to the underlying functional objectives” of doing so.</p>
<i>Solutran, Inc. v. Elavon, Inc.</i> , 931 F.3d 1161 (Fed. Cir. 2019)	07/30/2019	08/29/2019 (denied)	02/12/2020 (denied)	Reversing the district court’s denial of summary judgment on the basis of ineligibility of claims directed to

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				processing paper checks. Held that the claims were directed to “the abstract idea of crediting a merchant’s account as early as possible while electronically processing a check,” with no inventive concept.
<i>Chamberlain Grp., Inc. v. Techtronic Indus. Co. Ltd.</i> , 935 F.3d 1341 (Fed. Cir. 2019)	08/21/2019	10/21/2019 / 10/23/2019 (denied)	05/15/2020 (pending)	Reversing the district court’s denial of JMOL on the basis that the asserted claims, which were directed to “an apparatus and method for communicating information about the status of a movable barrier,” were ineligible. Held that the claims were directed to the abstract idea of “wirelessly communicating status information about a system,” with no inventive concept.
<i>American Axle & Mf’g v. NeapCo Holdings</i> , 939 F.3d 1355 (Fed. Cir. 2019)	10/03/2019	11/18/2019 (pending)	Time to file still pending	Affirming the district court’s grant of summary judgment on the basis that the asserted claims, which related to a method for manufacturing driveline propeller shafts with liners designed to attenuate transmitted vibrations, were ineligible. Held that the claims were directed to an application of Hooke’s law, which is a natural law “that mathematically relates the mass and/or stiffness of an object to the frequency with which that object oscillates and

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				<p>vibrates,” in a particular context. Rejected the patentee’s argument that the claims provided certain “desired results,” as the solution was not actually claimed. Also reiterated the importance of claims reciting the <i>means</i> of reaching those results, as opposed to the results themselves. Further stated, in disagreement with the dissent, that “the failure of the claims to designate how to achieve the desired result is” <i>not</i> “exclusively an issue of enablement.” At Step Two, held that the claims contained only routine and conventional elements.</p> <p>Judge Moore dissented, stating that she was “deeply troubled by the majority’s disregard for the second part of the <i>Alice/Mayo</i> test, its fact finding on appeal and its repeated misrepresentation of the record, in each instance to the patentee’s detriment; all when we are to be applying the summary judgment standard no less.” Stated that she did not believe the claims were directed to a natural law, and instead methods of “manufacturing shaft assemblies . . . to reduce specific types of vibrations.” Further stated that there were “many” inventive concepts, “about which there exist a least questions of fact</p>

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				which should have precluded summary judgment.” Finally, stated that the majority improperly conflated Section 112 requirements with Section 101.
<i>Ameranth, Inc. v. Domino’s Pizza, LLC</i> , 792 F. App’x 780 (Fed. Cir. 2019) (non-precedential)	11/01/2019	12/02/2019 (denied)	06/03/2020 (pending)	Affirmed grant of summary judgment on the basis that the asserted claims, which were directed to “systems enabled for synchronous communications and automatic formatting of a programmed handheld menu configuration,” were ineligible. Held that the claims were directed to the abstract idea of “synchronous communications and automatic formatting for different handheld devices,” with no inventive concept. Rejected reliance on expert declarations to the extent they were directed “unclaimed features.”
<i>Whitserve LLC v. Donuts Inc.</i> , 809 F. App’x 929 (Fed. Cir. 2020) (non-precedential)	04/10/2020	No petition found	Time to file still pending	Affirming dismissal on the basis that the asserted claims, which were directed to sending reminders to clients and obtain responses from them over the Internet, ineligible. Held that the claims were directed to the abstract idea of “keeping track of deadlines for clients and carrying out two-way communications with clients relevant to meeting those deadlines,” with no inventive concept.

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<p><i>Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.</i>, 955 F.3d 1317 (Fed. Cir. 2020)</p>	<p>04/14/2020</p>	<p>06/12/2020 (pending)</p>	<p>Time to file still pending</p>	<p>Panel majority reversing denial of summary judgment on the basis of ineligibility of claims covering “methods and systems for limiting and controlling access to resources in a telecommunications system.”</p> <p>Held that the defendant did not waive the ineligibility argument after not raising the issue in a post-verdict Rule 50 motion, reasoning that the district court had denied the defendant’s summary judgment motion but not on the basis that there were factual issues. Further held that, even if the issue had been waived, the majority would exercise its discretion to decide the issue, explaining that the defendant’s arguments had not shifted over time and because the eligibility issue was straightforward.</p> <p>Held that the claims were directed to the abstract idea of “controlling access to, or limiting permission to, resources,” with no inventive concept.</p> <p>Judge Newman dissented, stating that the issue had been waived and that, in any event, the majority’s decision on the merits contravened Supreme Court and Federal Circuit precedent.</p>

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<p><i>Cisco Sys., Inc. v. Uniloc 2017 LLC</i>, 813 F. App'x 495 (Fed. Cir. 2020) (non-precedential)</p>	05/13/2020	No petition filed	Time to file still pending	<p>Affirming grant of judgment on the pleadings on the basis that the asserted radio communication system patent claims were ineligible. Held that the claims were directed to the abstract idea of “selecting the highest ranked station.” Rejected the patentee’s arguments that the “factual allegations in the complaint should have precluded granting a motion to dismiss,” explaining that the “purported factual allegations were conclusory statements regarding eligibility.” Held that “[t]hese are not factual allegations; they are sweeping conclusory statements and the district court properly concluded that they did not preclude dismissal.” Held that the claims lacked any inventive concept, and in particular held that the patentee’s “only alleged inventive concept [was] coincident with the abstract idea itself.”</p>
<p><i>Elec. Commc'n Techs., LLC v. ShoppersChoice.com, LLC</i>, 958 F.3d 1178 (Fed. Cir. 2020)</p>	05/14/2020	No petition filed	Time to file still pending	<p>Affirming grant of judgment on the pleadings on the basis that the asserted automated notification messaging patent claims were ineligible. Held that the claims were directed to the abstract idea of “providing advance notification of the pickup or delivery of a mobile thing,” with no inventive concept.</p>

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<i>British Telecommc 'ns PLC v. IAC/InteractiveCorp</i> , 813 F. App'x 584 (Fed. Cir. 2020)	06/03/2020	Time to file still pending	Time to file still pending	Affirming dismissal on the basis that the asserted claims, which related to methods, systems, and apparatuses for “selecting information sources to provide to a user via telecommunication system,” were ineligible. Held that the claims were directed to the abstract idea of “providing lists of location-specific information sources to users based on their location,” with no inventive concept. Also rejected the argument that the district court incorrectly granted dismissal as to all claims of the patent when the court and defendant addressed only representative claim 1. Held that, although the patentee disputed the representativeness of claim 1, it “did not present any ‘meaningful argument for the distinctive significance of any claim limitation’ not found in claim 1.”
<i>Ubisoft Entertainment, S.A. v. Yousician Oy</i> , 814 F. App'x 588 (Fed. Cir. 2020)	06/11/2020	Time to file still pending	Time to file still pending	Affirming dismissal on the basis that the asserted claims, which were directed to “[a]n interactive game designed for learning to play guitar,” were ineligible. Held that the claims were directed to the processes of “gathering, analyzing, and displaying certain results,” and were no different from the “ordinary mental processes of a guitar instructor teaching

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				a student how to play the guitar.” Held that the claims lacked an inventive concept.
<i>Dropbox, Inc. v. Synchronoss Techs., Inc.</i> , 815 F. App’x 529 (Fed. Cir. 2020)	06/19/2020	Time to file still pending	Time to file still pending	<p>Affirming dismissal on the basis that various data transmission claims were ineligible. First, held that claims directed to the secure delivery of information in a network were ineligible. Agreed with the district court that the claims were directed to the abstract idea of “(1) associating a security level with a data resource, (2) associating a security level with a mode of identification of a user, and then (3) ensuring that the user’s security level is sufficiently high to meet the security level of the data resource to access the data resource, with no inventive concept.”</p> <p>Second, held that claims directed to synchronizing file uploads were ineligible. Agreed with the district court that the claims were directed to the abstract idea of “exchanging data using a computer,” with no inventive concept.</p> <p>Third, held that claims directed to backing up data were ineligible. Agreed with the district court that the claims recited “essentially the same process as a</p>

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				<p>person manually transferring data from one mobile device to another, with the person herself acting as the ‘server,’” with no inventive concept.</p> <p>Finally, rejected the patentee’s argument that it pled sufficient allegations of an inventive concept to avoid dismissal. Held that those allegations were merely conclusory statements.</p>

B. Biotechnology/Life Sciences Patents

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<i>In re BRCA1- and BRCA2- Based Hereditary Cancer Test Patent Litigation</i> , 774 F.3d 755 (Fed. Cir. 2014)	12/17/2014	No petition found	No petition found	Affirming the district court’s denial of a preliminary injunction on the basis that Myriad was unlikely to succeed on the merits because its claims were drawn to ineligible subject matter. Held that the claims were ineligible because they merely covered a mental process of comparing BRCA sequences, using routine and conventional techniques.

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<i>Ariosa Diagnostics, Inc. v. Sequenom, Inc.</i> , 788 F.3d 1371 (Fed. Cir. 2015)	06/12/2015	12/02/15 (denied)	06/27/2016 (denied)	Affirming the grant of summary judgment on the basis that the asserted claims, which related to making a diagnosis for certain fetal characteristics based on the detection of paternally inherited cffDNA, were ineligible. Held that the claims were directed to the natural phenomenon of the existence of cffDNA in maternal blood. Held that the claims lacked an inventive concept because the recited amplification and detection steps were “well-understood, routine and conventional.”
<i>Genetic Techs. Ltd. v. Merial L.L.C.</i> , 818 F.3d 1369 (Fed. Cir. 2016)	04/08/2016	No petition found	08/08/2016 (denied)	Affirming the district court’s grant of dismissal on the basis that the asserted claims, which recited methods of analyzing sequences of DNA, were ineligible. Held that the claims were directed to the natural law of “the principle that certain non-coding and coding sequences are in linkage disequilibrium with one another.” Held that the claims lacked an inventive concept. As to the claims’ physical steps, held that amplifying and analyzing steps required no more than routine and conventional techniques. As to the claims’ detecting step, held that it was no more than a mental process step that can be performed entirely in the human mind.

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<i>The Cleveland Clinic Foundation v. True Health Diagnostics LLC</i> , 859 F.3d 1352 (Fed. Cir. 2017)	06/16/2017	07/31/2017 (denied)	01/16/2018 (denied)	Affirming the district court’s dismissal on the basis that the asserted claims reciting methods for detecting an enzyme and correlating the results to cardiovascular risk were ineligible. Rejected the appellant’s argument that the district court should have decided the issue after claim construction, noting that the appellant had not provided any proposed construction of any terms or proposed expert testimony that would have changed the eligibility analysis. Held that the claims were directed to multistep methods for observing the law of nature that the enzyme correlates to cardiovascular disease. Held that the claims lacked an inventive concept because, although they discovered this correlation, they did not “extend their discovery . . . to a patentable method,” as they required only conventional detection and comparison methods.
<i>Roche Molecular Sys., Inc. v. Cepheid</i> , 905 F.3d 1363 (Fed. Cir. 2018)	10/09/2018	No petition found	No petition found	Affirmed the district court’s grant of summary judgment on the basis that the asserted claims, which were directed to methods of detecting a bacterium, were ineligible. Held that the claims specifically directed to primers were ineligible based on <i>BRCA1/BRCA2</i> ,

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				<p>holding that primers “are indistinguishable from their corresponding nucleotide sequences on . . . naturally occurring . . . gene[s].” However, made clear that the decision was not addressing the eligibility of primers “that have been altered—e.g., investigator-induced mutation(s) such that their nucleotide sequences are not found in nature, or primers which are chemically modified or labeled by investigators such that they cannot be isolated directly from naturally occurring DNA.”</p> <p>Also held that the claims specifically directed to a method of a diagnostic test determining the presence of the bacterium at issue, were directed to a natural relationship “between the eleven naturally occurring position-specific signature nucleotides and the presence of [the bacterium] in the sample.” Held that the claims lacked an inventive concept because they required routine and conventional technology, such as PCR, to carry out the method.</p> <p>Judge O’Malley concurred, but wrote separately to express that <i>BRCA1/BRCA2</i> should be revisited because the question in that case was narrower than the holding,</p>

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				<p>and that “certain arguments and evidence” presented in this case were not before that panel. Procedural point: stated that <i>BRCA1/BRCA2</i> presented the question only of whether the district court had abused its discretion in denying a motion for preliminary injunction, and whether the patentee was likely to succeed on the merits of its infringement claim, and the district court made no findings as to whether the primer claims “were indeed patent ineligible.” Substantive point: stated that there can be cases where primers differ structurally and functionally from their natural counterparts, which can potentially be patent-eligible.</p>
<p><i>Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC</i>, 915 F.3d 743 (Fed. Cir. 2019)</p>	<p>02/06/2019</p>	<p>04/08/2019 (denied)</p>	<p>10/01/2019 (denied)</p>	<p>Affirming dismissal of claims directed to diagnosing a neurological disorder by detecting certain antibodies in the body. Held that the claims were directed to the natural “correlation between the presence of naturally-occurring MuSK autoantibodies in bodily fluid and MuSK-related neurological diseases like MG,” with no inventive concept. In dicta, reaffirmed that “claiming a new treatment for an ailment, albeit using a natural law, is not claiming the natural law.”</p>

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<i>Cleveland Clinic Found. v. True Health Diagnostics</i> , 760 F. App'x 1013 (Fed. Cir. 2019) (non-precedential)	04/01/2019	No petition found	No petition found	Affirming dismissal on the basis that the asserted claims, which were directed to the detection of elevated levels of the enzyme myeloperoxidase (MPO) in the blood sample of a patient with cardiovascular disease (in comparison to a control group) were ineligible. Held that the claims were directed to the natural law that levels of MPO were correlated with atherosclerotic cardiovascular disease, with no inventive concept.
<i>Genetic Veterinary Sciences v. Laboklin GmbH & Co. KG</i> , 933 F.3d 1302 (Fed. Cir. 2019)	08/09/2019	No petition found	No petition found	<p>Affirming the district court's grant of JMOL on the basis of ineligibility of detection method claims. Specifically, the claims recited a method of detecting a mutation in a particular gene. The mutation is associated with a disease called Hereditary Nasal Parakeratosis in Labrador retrievers.</p> <p>At Step One, the Federal Circuit held that the claims were directed to a natural phenomenon, stating that "they begin and end with the point discovery of the HNPk mutation in the SUV39H2 gene." The court explained that the claims "simply state[]" that "the search for the mutation involves the laboratory examination of</p>

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				<p>Labrador Retriever DNA, which resulted in the revelation of the mutation.”</p> <p>At Step Two, the court held that the claims contained no inventive concept, as they involved only “conventional or known laboratory techniques to observe the newly discovered mutation.” As additional support for its conclusion, the court cited to the defendant’s expert testimony that the techniques “have been around for years” and that use of “primer pairs is a ‘decades’ old technique.”</p>
<p><i>INO Therapeutics LLC v. Praxair Distribution Inc.</i>, 782 F. App’x 1001 (Fed. Cir. 2019) (non-precedential)</p>	<p>08/27/2019</p>	<p>09/26/2019 (denied)</p>	<p>04/06/2020 (denied)</p>	<p>The panel majority affirmed the district court’s judgment, after a bench trial, that claims reciting a method of treating hypoxic respiratory failure in newborns with nitric oxide were ineligible. At Step One, held that the claims were directed to the natural phenomenon that such treatment increased the risk for pulmonary edema in newborns also suffering from left ventricle disorder. Held that the focus of the claims was essentially withholding treatment based on that natural phenomenon. At Step Two, held that the claims lacked any inventive concept, as using nitric oxide to treat hypoxic respiratory failure in newborns (including</p>

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				<p>the specific dosage of 20 ppm) was long known.</p> <p>Judge Newman dissented, stating that she would have held the claims patent-eligible, as the claimed method does not exist in nature and instead “was designed by and is administered by humans.”</p>

II. SUSTAINED ELIGIBILITY UNDER ALICE

A. Software/Tech Patents

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<i>DDR Holdings, LLC v. Hotels.com, L.P.</i> , 773 F.3d 1245, 1256 (Fed. Cir. 2014)	12/05/2014	No petition found	No petition found	Affirming the district court’s denial of judgment as a matter of law that the asserted claims were ineligible. Held that the claims, which recited a method of generating composite web pages combining visual elements of a host website and content of a third-party merchant, were “necessarily rooted in computer technology in order to overcome a problem specifically rising in the realm of computer networks,” and overrode the “routine and conventional sequence of events ordinarily triggered by the click of a hyperlink.”
<i>Enfish, LLC v. Microsoft Corp.</i> , 822 F.3d 1327 (Fed. Cir. 2016)	05/12/2016	No petition found	No petition found	Reversing the district court’s grant of summary judgment on the basis that the asserted “self-referential” database claims were ineligible. Held that the claims were not directed to an abstract idea, and instead were directed to a “specific improvement to the way computers operate, embodied in the self-referential table.” The claims were “not simply directed to <i>any</i> form of storing tabular data, but instead [were] specifically directed to a <i>self-referential</i> table for a computer database.” Noted that the specification “also

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				teaches that the self-referential table functions differently than conventional database structures.”
<i>BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC</i> , 827 F.3d 1341 (Fed. Cir. 2016)	06/27/2016	07/11/2016 (denied)	No petition found	Vacating the district court’s grant of motion to dismiss on the basis that patent claims directed to filtering content retrieved from an Internet computer network were ineligible. Held that the claims were directed to an abstract idea because “it is a long-standing, well-known method of organizing human behavior, similar to concepts previously found to be abstract.” However, held that when the claims are viewed in an ordered combination, there is sufficient inventive concept to confer eligibility. Identified the inventive concept as the “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user.” Held that this constituted a “specific technical solution of the abstract idea.”
<i>McRO, Inc. v. Bandai Namco Games America Inc.</i> , 837 F.3d 1299 (Fed. Cir. 2016)	09/13/2016	10/13/2016 (denied)	No petition found	Reversing the district court’s grant of judgment on the pleadings that the asserted claims directed to “automatically animating lip synchronization and facial expression of three-dimensional characters” were ineligible. Held that the claimed rules were “limited to rules within certain common characteristics,

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				i.e., a genus.” Further held that the “computer here is employed to perform a distinct process to automate a task previously performed by humans.” Finally, held that the claims were “directed to a patentable, technological improvement over the existing, manual 3-D animation techniques” and therefore were “not directed to an abstract idea.”
<i>Amdocs (Israel) Ltd. v. Openet Telecom, Inc.</i> , 841 F.3d 1288 (Fed. Cir. 2016)	11/01/2016	12/08/2016 (denied)	07/24/2017 (denied)	Reversing the district court’s grant of summary judgment on the basis that various claims were ineligible. Held that claims directed to correlating network accounting records and other usage information were eligible, even if they were directed to an abstract idea, because they provided unconventional solutions to technological problems and provided advantages over the prior art.
<i>Trading Techs. Int’l, Inc. v. CQG, Inc.</i> , 675 F. App’x 1001 (Fed. Cir. 2017) (non-precedential)	01/18/2017	02/17/2017 (denied)	No petition found	Affirming the district court’s denial of the defendant’s motion for judgment as a matter of law on the basis that the asserted claims covering electronic trading of stocks, bonds, futures, options and similar products were eligible. Held that the claims recited a “specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface’s structure that is addressed to and resolves a

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				specifically identified problem in the prior state of the art.” Also stated in dicta that “the public interest in innovative advance is best served when close questions of eligibility are considered along with the understanding flowing from review of the patentability criteria of novelty, unobviousness, and enablement, for when these classical criteria are evaluated, the issue of subject matter eligibility is placed in the context of the patent-based incentive to technologic progress.”
<i>Thales Visionix Inc. v. United States</i> , 850 F.3d 1343 (Fed. Cir. 2017)	03/08/2017	04/24/2017 (denied)	No petition found	Reversing the lower tribunal’s grant of judgment on the pleadings on the basis that the asserted claims—which recited an inertial tracking system for tracking the motion of an object relative to a moving reference frame—were ineligible. Held that the claims were not directed to an abstract idea because they “specif[ied] a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a moving platform.”
<i>Visual Memory LLC v. NVIDIA Corp.</i> , 867 F.3d 1253 (Fed. Cir. 2017)	08/15/2017	09/14/2017 (denied)	No petition found	Reversing the district court’s grant of dismissal on the basis that the asserted computer memory claims were ineligible. Held that the claims were not directed to an

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				abstract idea, but rather to a technological improvement: an enhanced computer memory system, by using programmable operational characteristics that are configurable based on the type of processor.
<i>Finjan, Inc. v. Blue Coat Sys., Inc.</i> , 879 F.3d 1299 (Fed. Cir. 2018)	01/10/2018	No petition found	No petition found	Affirming the district court’s finding, after a jury trial, that the asserted claims covering computer security and monitoring systems were patent-eligible. Held that the claims are directed to “non-abstract improvement in computer functionality, rather than the abstract idea of computer security [at] large.” Did not reach <i>Alice</i> step 2.
<i>Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.</i> , 880 F.3d 1356 (Fed. Cir. 2018)	01/25/2018	02/26/2018 (denied)	No petition found	Affirming the district court’s determination that the claims covering an improved display interface were patent-eligible. Held that the claims were not directed to an abstract idea, but rather an improvement in the functioning of computers, particularly those with small screens.
<i>Berkheimer v. HP Inc.</i> , 881 F.3d 1360 (Fed. Cir. 2018)	02/08/2018	03/12/2018 (denied)	09/28/2018 (pending)	Affirmed in part the district court’s grant of summary judgment on the basis that claims reciting “digitally processing and archiving files in a digital asset management system” were ineligible. Held that the claims were directed to the abstract idea “of parsing, comparing, and storing data.” Held that “[w]hile patent eligibility is ultimately a

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				question of law, the district court erred in concluding there are no underlying factual questions to the § 101 inquiry.” Held that some claims lacked an inventive concept because they failed to provide an improvement to the existing technology. However, remanded to the district court as to other claims, finding that there was a question of fact as to whether they provided an inventive concept.
<i>Data Engine Techs. LLC v. Google LLC</i> , 906 F.3d 999 (Fed. Cir. 2018)	10/09/2018	11/29/2018 (denied)	No petition found	<p>Affirmed in part and reversed in part the district court’s grant of judgment on the pleadings on the basis that the asserted claims, which were directed to systems and methods of making and navigating spreadsheets (“tab claims”), as well as tracking changes made in spreadsheets, were ineligible.</p> <p>Held that the tab claims were not directed to an abstract idea, but rather “to a specific method for navigating through three-dimensional electronic spreadsheets.” This, the court, held, “improve[d] the efficient functioning of computers” by “allow[ing] the user to simply and conveniently ‘flip through’ several pages of [a] notebook to rapidly locate information of interest.” Reiterated that the eligibility “inquiry requires that the claims be read as a whole.”</p>

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				Held that the claims directed to tracking changes in a spreadsheet were ineligible. Held that the claims were directed to the abstract idea of “identifying and storing electronic spreadsheet pages.” Held that the claims lacked an inventive concept because they recited nothing other than “generic steps of creating a base version of a spreadsheet, creating a new version of the spreadsheet, and determining changes made to the original version.”
<i>Ancora Techs., Inc. v. HTC America, Inc.</i> , 908 F.3d 1343 (Fed. Cir. 2018), as amended (Nov. 20, 2018)	11/16/2018	No petition found	No petition found	Reversing the district court’s grant of dismissal on the basis that claims directed to “limiting a computer’s running of software not authorized for that computer to run” were ineligible. Held that at step one, “[w]e examine the patent’s ‘claimed advance’ to determine whether the claims are directed to an abstract idea.” Also explained that “[c]omputers are improved not only through changes in hardware; ‘[s]oftware can make non-abstract improvements to computer technology.’” Held that the claims were not directed to an abstract idea, and instead were directed to improved computer security. Specifically, held that the claims “specifically identifies how that functionality improvement is effectuated in an assertedly unexpected way: a structure containing a license record is

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				<p>stored in a particular, modifiable, non-volatile portion of the computer’s BIOS, and the structure in that memory location is used for verification by interacting with the distinct computer memory that contains the program to be verified. In this way, the claim addresses a technological problem with computers: vulnerability of license-authorization software to hacking.” Did not proceed to step two.</p> <p>Also noted that the court has recognized “overlaps between some step one and step two considerations.”</p>
<p><i>SRI Int’l, Inc. v. Cisco Sys., Inc.</i>, 918 F.3d 1368 (Fed. Cir. 2019) (opinion modified July 12, 2019, but not as to patent eligibility)</p>	<p>03/20/2019 (modified 07/12/2019)</p>	<p>05/10/2019 (denied)</p>	<p>11/08/2019 (denied)</p>	<p>The claims at issue covered a “computer-automated method of hierarchical event monitoring.” A majority panel affirmed the district court’s denial of summary judgment on the basis of ineligibility. Held that the claims were not directed to an abstract idea, but rather to “using a specific technique—using a plurality of network monitors that each analyze specific types of data on the network and integrating reports from the monitors—to solve a technological problem arising in computer networks: identifying hackers or potential intruders into the network.” Did not reach step two.</p> <p>Judge Lourie dissented, stating that he believed that the claims were directed to the</p>

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				abstract idea of “monitoring network security,” with no inventive concept.
<i>Uniloc USA, Inc. v. ADP, LLC</i> , 772 F. App’x 890 (non-precedential) (Fed. Cir. 2019)	05/24/2019	06/14/2019 (petition for panel rehearing, denied)	No petition found	<p>Affirming in part and reversing in part the district court’s dismissal on the basis of the eligibility of certain claims and ineligibility of certain other claims.</p> <p>Held that certain claims were “directed to the use of file packets with segments configured to initiate centralized registration of an application from an application server.” Although the goal of the claims were “functional: to allow centralized distribution of software,” the Federal Circuit held, claims were directed to an improvement in “<i>how</i> this is done.”</p> <p>Held that other claims were not ineligible because they were “directed to a particular way of using a conventional application server to nevertheless allow on-demand installation of an application incorporating preferences from two different sources by adding the application manager and configuration manager as additions to each application.”</p> <p>Held that other claims were directed to “using a desktop interface to access an application server,” with no inventive concept. Rejected the patentee’s reliance on the allowance of the claims as a basis for eligibility, holding that</p>

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				<p>“mere allowance of claims during prosecution does not preclude dismissal for patent ineligibility.”</p> <p>Held that other claims were directed to “a license management method that indicates a user’s authorization to access an application,” with no inventive concept.</p>
<p><i>Koninklijke KPN N.V. v. Gemalto M2M GmbH</i>, 942 F.3d 1143 (Fed. Cir. 2019)</p>	<p>11/15/2019</p>	<p>No petition found</p>	<p>No petition found</p>	<p>Reversed the district court’s grant of judgment on the pleadings on the basis that the asserted claims, which related to a device that generated check data, were ineligible. Held at Step One that the claims were “directed to an improved check data generating device that enables a data transmission error detection system to detect a specific type of error that prior art systems could not.” Further explained that the claims recited “a sufficiently specific implementation (i.e., modifying the permutation applied to the original data ‘in time’) of an existing tool (i.e., check data generating device) that improves the functioning of the overall technological process of detecting systematic errors in data transmissions.” Did not proceed to Step Two.</p>
<p><i>Uniloc USA, Inc. v. LG Elecs. USA, Inc.</i>, 957 F.3d 1303 (Fed. Cir. 2020)</p>	<p>04/30/2020</p>	<p>No petition found</p>	<p>Time to file still pending</p>	<p>Reversing grant of dismissal on the basis that the asserted communication system patent claims were ineligible. Noted that, “[i]n cases</p>

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				<p>involving software innovations, this inquiry often turns on whether the claims focus on specific asserted improvements in computer capabilities or instead on a process or system that qualifies an abstract idea for which computers are invoked merely as a tool.” Held at Step One that the claims were directed to a “patent-eligible improvement to computer functionality, namely the reduction of latency experienced by parked secondary stations in communication systems.”</p> <p>Rejected the argument that the claims “themselves must expressly mention the reduced latency achieved by the claimed system.” Explained that “[c]laims need not articulate the advantages of the claimed combinations to be eligible.” Held that the claims “are directed to a specific asserted improvement to the functionality of the communication system itself.”</p>

B. Biotechnology/Life Sciences Patents

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<i>Rapid Litigation Mgm’t Ltd. v. CellzDirect, Inc.</i> , 827	07/05/2016	No petition found	No petition found	Reversing the district court’s grant of summary judgment on the basis that patent claims directed to a cryopreservation technique for

CASE	DATE	PETITION FOR EN BANC REHEARING	PETITION FOR WRIT OF CERTIORARI	HOLDING
F.3d 1042 (Fed. Cir. 2016)				hepatocytes were ineligible. Held that the claims were not directed to an abstract idea because they were directed to a “new and improved” technique. Found that the “inventors discovered the cells’ ability to survive multiple freeze-thaw cycles, but that is not where they stopped, nor is it what they patented.” The inventors instead “employed their natural discovery to create a new and improved way of preserving hepatocyte cells for later use.” As to step two, the court stated that even if the claims were directed to hepatocytes’ natural ability to survive multiple freeze-thaw cycles, the claims recite an improved process for preserving hepatocytes for later use, which would transform the claims from covering a patent-ineligible concept to an eligible invention. This improved process, the court noted, provided significant benefits over the prior art methods, including that it is used to create hepatocyte preparations that “no longer exhibit unacceptable loss of viability.”
<i>Exergen Corp. v. KAZ USA, Inc.</i> , 725 F. App’x 959 (Fed. Cir. Mar. 8, 2018) (non-precedential)	03/08/2018	No petition found	No petition found	Affirming the district court’s denial of judgment as a matter of law that the asserted claims, which covered a body temperature detector by detecting the temperature of the forehead directly above the superficial temporal artery, were ineligible. Held that the claims were directed to the measurement of a natural phenomenon: core body temperature.

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				<p>Held that the claimed measurement method was not conventional, routine, and well-understood because “[f]ollowing years and millions of dollars of testing and development, the inventor determined for the first time the coefficient representing the relationship between temporal-arterial temperature and core body temperature and incorporated that discovery into an unconventional method of temperature measurement.” Applied clear error standard of review to the district court’s fact finding on the issue.</p> <p>Judge Hughes dissented, stating that in his view the claim elements were well-known, routine, and conventional. He stated that the claims “begin and end with a law of nature,” as the claims “cover temperature detectors that calculate a person’s core body temperature.” He further stated that the “prior art recognized long ago” that a known mathematical heat balance equation enabled calculation of core body temperature from skin and air temperature measurements. He also stated that the prior art recognized that temperature-detecting products made use of the same claimed elements for decades. Finally, he stated that “a claimed invention’s unconventionality, by itself, is not sufficient to render the claim patent eligible.”</p>

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<p><i>Vanda Pharm. Inc. v. West-Ward Pharm. Int'l Ltd.</i>, 887 F.3d 1117 (Fed. Cir. 2018)</p>	<p>04/13/2018</p>	<p>06/12/2018 (denied)</p>	<p>12/27/2018 (pending)</p>	<p>The claims in <i>Vanda</i> were directed to a method of using iloperidone to treat patients having a certain genotype for schizophrenia. Op. 30. The claims recite specific dosages, and the specification explains “how certain ranges of administered iloperidone correlate with the risk of” the “prolongation” of the time interval between the Q and T waves of the heart rhythm (or QTc). <i>Id.</i> at 3 n.2, 30. At step one, the majority held that the claims were directed to “‘a new way of using an existing drug’ that is safer for patients because it reduces the risk of QTc prolongation.” <i>Id.</i> at 28, 30. The majority further explained that the claims are “directed to a specific method of treatment for specific patients using a specific compound at specific doses to achieve a specific outcome,” and that they “recite more than the natural relationship between CYP2D6 metabolizer genotype and the risk of TQc prolongation.” <i>Id.</i> at 32. “Instead,” the majority concluded, the claims “recite a method of treating patients based on this relationship that makes iloperidone safer by lowering the risk of QTc prolongation.” The majority did not reach step two.</p> <p>Chief Judge Prost dissented, stating that, as an initial matter, the majority conflated step one with the inventive concept analysis of step two. Dissent 1. And “[o]nce the natural law</p>

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				<p>claimed in the . . . patent is understood in a manner consistent with <i>Mayo</i>,” she explained, “what remains fails to supply the requisite inventive concept to transform the natural law into patent-eligible subject matter.” <i>Id.</i> at 2. Chief Judge Prost stated that the majority’s reference to the claimed method being “safer for patients” was merely an “optimization of an existing treatment of schizophrenia.” <i>Id.</i> at 5. She explained that “[t]he patent simply discloses the natural law that a known side effect of the existing treatment could be reduced by administering a lower dose to CYP2D6 poor-metabolizers. It claims no more than instructions directing that audience to apply the natural law in a routine and conventional manner.” <i>Id.</i> at 5-6.</p>
<p><i>Natural Alternatives Int’l, Inc. v. Creative Compounds, LLC</i>, 918 F.3d 1338 (Fed. Cir. 2019)</p>	<p>03/15/2019</p>	<p>No petition found</p>	<p>No petition found</p>	<p>The treatment method claims at issue in this case were specifically directed to a method of regulating hydronium ion concentration in human tissue or increasing anaerobic working capacity in a human subject by providing to a subject an amount of beta-alanine to blood or blood plasma effective to increase beta-alanylhistidine dipeptide synthesis in the human tissue. The panel majority reversed the district court’s holding that, under the patentee’s relevant proposed claim constructions, the claims are not patent-eligible. The majority first recognized that, as</p>

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				<p>the CAFC explained in <i>Vanda</i>, “claims that are directed to particular methods of treatment are patent eligible.” The majority then held that the claims at issue “are directed to patent eligible new ways of using an existing product, beta-alanine”—“treatment claims”—that fall “clearly within the scope of” Section 101. The majority acknowledged that the claims were similar to <i>Mayo</i> in that they “similarly rely on the relationships between the administration of beta-alanine and beta-alanylhistidine dipeptide synthesis.” But the majority distinguished the Natural Alternative claims from the <i>Mayo</i> claims on the basis that the Natural Alternative claims “are treatment claims,” and “require specific steps be taken in order to bring about a change in a subject, altering the subject’s natural state.” The majority also relied on the patentee’s argument that “the quantities being administered do not” exist in nature, and “the claimed consumption greatly exceeds natural levels.”</p> <p>The majority then concluded that the Natural Alternatives claims “at issue are treatment claims. They cover using a natural product in unnatural quantities to alter a patient’s natural state, to treat a patient with specific dosages outlined in the patents.” Thus, the majority held, the claims are patent-eligible. The</p>

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				<p>majority likewise held that related product and manufacturing claims were patent-eligible.</p> <p>Judge Reyna dissented from his “colleagues’ broad stroke of eligibility, primarily” because he concluded that the majority’s analysis relied “on an erroneous claim construction.” He ultimately concurred in the result of a remand, which he “expect[s] permits the district court to revisit the § 101 question under a proper claim construction.” Judge Reyna believed that the patentee’s proposed construction of “dietary supplement” and “human dietary supplement” impermissibly imported limitations from the specification not otherwise found in the plain language of the claims, including that “beta-alanine ‘effectively increases the function of a tissue when administered to the human over a period of time.’” Judge Reyna asked “whether anything meaningful has been achieved in these circumstances,” and “whether the time has come for this court to reconsider whether a Rule 12(c) motion based on § 101 should be decided before claim construction.”</p>
<p><i>Endo Pharms. Inc. v. Teva Pharms. USA, Inc.</i>, 919 F.3d 1347 (Fed. Cir. 2019)</p>	<p>03/28/2019</p>	<p>No petition found</p>	<p>No petition found</p>	<p>Reversing the district court’s dismissal on the basis that the asserted patent claims, which were directed to a method of treating pain in a renally impaired patient with oxymorphone, were ineligible. Held that the claims were “directed to a patent-eligible method of using</p>

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				oxymorphone or a pharmaceutically acceptable salt thereof to treat pain in a renally impaired patient,” requiring specific steps and avoiding “possible issues in dosing” and allowing for treatment with “the lowest available dose.”
<i>Boehringer Ingelheim v. Mylan Pharm. Inc.</i> , 803 F. App’x 397 (Fed. Cir. 2020) (non-precedential)	03/16/2020	No petition found	No petition found	Reversing grant of judgment on the pleadings and holding the claims, which were directed to a method of “treating and/or preventing metabolic diseases” by “orally administering . . . a DPP-IV inhibitor,” patent-eligible. Held that the claims were eligible at step one because they were directed to a treatment method, and did not reach step two. Rejected the argument that simply because DPP-IV inhibitors were “metabolized by the liver rather than the kidney” did not make the claims “directed to” that natural ability.
<i>Illumina, Inc. v. Ariosa Diagnostics, Inc.</i> , 952 F.3d 1367 (Fed. Cir. 2020)	03/17/2020	04/16/2020 (pending)	Time to file still pending	Panel majority reversing grant of summary judgment and holding the claims at issue, which were directed to a method of “preparing a fraction of cell-free DNA that is enriched in fetal DNA,” patent-eligible. Held that the claims were not diagnostic method or treatment method claims, but instead preparation claims. Held that the claims were not directed to the natural phenomenon “that cell-free fetal DNA tends to be shorter than cell-free maternal DNA in a mother’s bloodstream” but rather to a

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				<p>method that utilizes it, requiring specific steps to “to increase the relative amount of fetal DNA as compared to maternal DNA in the sample.” Held that the method “steps change the composition of the mixture, resulting in a DNA fraction that is different from the naturally-occurring fraction in the mother’s blood.”</p> <p>Judge Reyna dissented, stating that the majority erred in summarily dismissing precedent by placing the claims into a “method of preparation” bucket, for which there is no per se exception to the precedent. Stated that the only potential advance offered by the claims was the discovery of the natural phenomenon itself, which precedent had held as not conferring eligibility. Also stated that changing the composition of naturally occurring substances, where the substances themselves are not changed, does not confer eligibility.</p>
<p><i>Cardionet, LLC v. Infobionic, Inc.</i>, 955 F.3d 1358 (Fed. Cir. 2020)</p>	<p>04/17/2020</p>	<p>05/18/2020 (denied 6/4/2020)</p>	<p>Time to file still pending</p>	<p>Reversing grant of dismissal on the basis of ineligibility of claims relating to cardiac monitoring technology. Held that the claims were not directed to the abstract idea “that atrial fibrillation and atrial flutter ‘can be distinguished by focusing on the variability of the irregular heartbeat.’” Held that, instead, the claims were directed to an “improved cardiac monitoring device”—in particular, a device</p>

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				<p>that “detects premature ventricular beats, and determines the relevance of the beat-to-beat timing to atrial fibrillation or atrial flutter, taking into account the variability in the beat-to-beat timing caused by premature beats identified by the device’s ventricular beat detector.” This “more accurately detects the occurrence of atrial fibrillation and atrial flutter . . . and allows for more reliable and immediate treatment of these two medical conditions.”</p> <p>Finally, rejected the argument that, at the Rule 12(b)(6) stage, assessment of the state of the art must be considered at Step One. Held that the question at Step One “is whether the claims as a whole are ‘directed to’ an abstract idea, regardless of whether the prior art demonstrates that the idea or other aspects of the claim are known, unknown, conventional, unconventional, routine, or not routine.” Also stated that the court “may consult the intrinsic evidence and conclude that the claims are directed to” improvements in the technology, and that it “need not consult the prior art to see if, in fact, the assertions of improvement in the patent’s written description are true.” Stated that the Section 101 inquiry is only a threshold test, and that Sections 102 and 103 are reserved for such “comparison of the prior art and the claims to determine if the claims are, in fact, an improvement over the prior art.” Stated that</p>

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				<p>“we do not hold today that it is impermissible for courts to ‘look[] outside the intrinsic evidence’ as part of their <i>Alice</i> step one inquiry,” but instead that “there is no basis for requiring, as a matter of law, consideration of the prior art in the step one analysis in every case,” and that it is at the court’s “discretion” as to whether to do so or not. For instance, “[i]f the extrinsic evidence is overwhelming to the point of being undisputable, then a court could take notice of that and find the claims directed to” an abstract idea—“but the court is not required to engage in such an inquiry in every case.”</p> <p>Judge Dyk concurred in the outcome on the merits, but dissented as to the discussion concerning consideration of the prior art at Step One. Stated that the parties never argued the issue and, regardless, the approaches suggested by the majority are “not consistent with Supreme Court and circuit authority.” Further stated that the majority’s statements were dicta, that the parties agreed that longstanding practice is relevant to Step One, and that “any limitation on the use of extrinsic evidence would be inconsistent with binding authority.”</p>

III. ALICE DETERMINATION PREMATURE

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<i>Berkheimer v. HP Inc.</i> , 881 F.3d 1360 (Fed. Cir. 2018)	02/08/2018	03/21/2018 (denied)	09/28/2018 (denied)	Affirmed in part the district court’s grant of summary judgment on the basis that claims reciting “digitally processing and archiving files in a digital asset management system” were ineligible. Held that the claims were directed to the abstract idea of “of parsing, comparing, and storing data.” Held that “[w]hile patent eligibility is ultimately a question of law, the district court erred in concluding there are no underlying factual questions to the § 101 inquiry.” Held that some claims lacked an inventive concept because they failed to provide an improvement to the existing technology. However, remanded to the district court as to other claims, finding that there was a question of fact as to whether they provided an inventive concept.
<i>Aatrix Software, Inc. v. Green Shades Software, Inc.</i> , 882 F.3d 1121 (Fed. Cir. 2018)	02/14/2018	03/19/2018 (denied)	No petition found	Vacating the district court’s grant of motion to dismiss on the basis that the asserted claims, which recited systems and methods for designing, creating, and importing data into a viewable form on a computer for manipulation, were ineligible. Held that the district court

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				<p>erred “to the extent it determined that” the claims were ineligible “because it is not directed to a tangible embodiment,” holding that the claimed invention was “very much a tangible system.” Also held that there were issues of fact regarding whether the claims contained an inventive concept.</p> <p>Judge Reyna dissented, disagreeing with the “majority’s broad statements on the role of factual evidence in a § 101 inquiry.” Stated that it was contrary to the clear precedent that the § 101 inquiry “is a legal question.”</p>
<p><i>Cellspin Soft, Inc. v. Fitbit, Inc.</i>, 927 F.3d 1306 (Fed. Cir. 2019)</p>	<p>06/25/2019</p>	<p>No petition found</p>	<p>09/23/2019 (denied)</p>	<p>Vacating grant of dismissal on the basis of ineligibility as to patent claims generally relating to connecting a data capture device to a “mobile device so that a user can automatically publish content from the data capture device to a website.” Held that the claims were directed to the abstract idea of “capturing and transmitting data from one device to another.”</p> <p>Held, however, that the district court erred in ignoring the patentee’s allegations that “identify several ways in which its application of capturing,</p>

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				<p>transferring, and publishing data was unconventional.” The district court “discounted these allegations” on the basis that the patentee failed to cite support from the patent specification. The Federal Circuit noted that in <i>Aatrix</i>, “we repeatedly cited allegations in the <i>complaint</i> to conclude that the disputed claims were potentially inventive.”</p> <p>“While we do not read <i>Aatrix</i> to say that any allegation about inventiveness, wholly divorced from the claims or the specification, defeats a motion to dismiss, plausible and specific factual allegations that aspects of the claims are inventive are sufficient. <i>As long as what makes the claims inventive is recited by the claims</i>, the specification need not expressly list all the reasons why this claimed structure is unconventional. In this case, Cellspin made specific, plausible factual allegations about why aspects of its claimed inventions were not conventional, e.g., its two-step, two-device structure requiring a connection before data is transmitted. The district court erred by not accepting those allegations as true.”</p>

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				Finally, the appeals court held that the district court erred in concluding “that issued patents are presumed <i>valid</i> but not presumed <i>patent eligible</i> .”
<i>MyMail, Ltd. v. Oovoo, LLC</i> , 934 F.3d 1373 (Fed. Cir. 2019)	08/16/2019	No petition found	No petition found	Vacating and remanding the district court’s grant of judgment on the pleadings on the basis of ineligibility of asserted patent claims, which covered “methods of modifying toolbars that are displayed on Internet-connected devices such as personal computers.” Held that, under <i>Aatrix</i> , the district court incorrectly decided the question of patent eligibility without first resolving the parties’ claim construction dispute that related to the eligibility issue. Judge Lourie dissented, stating that “the claims at issue are clearly abstract, regardless of claim construction.”

IV. PATENT TRIAL AND APPEAL BOARD DECISIONS

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<i>Versata Development Grp., Inc. v. SAP America, Inc.</i> ,	07/09/2015	No petition found	No petition found	Affirming the PTAB’s decision that the challenged claims were ineligible.

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793 F.3d 1306 (Fed. Cir. 2015)				However, the court also held that it has the power to review the PTAB decision as to whether a challenged patent is a “covered business method patent,” and affirmed the PTAB’s determination that the challenged patent here was such a CBM patent. Additionally, held that CBM review proceedings can include Section 101 challenges. Judge Hughes dissented in part, stating that the majority’s determination that the court has the power to review whether a challenged patent is a “covered business method patent” had no support and was outside the statute, as the court has no jurisdiction over the PTAB’s decision to institute CBM review (and thus, the PTAB’s decision as to whether a challenged patent is a CBM patent).
<i>In re Smith</i> , 815 F.3d 816 (Fed. Cir. 2016) *appeal from a PTO examiner’s rejection	03/10/2016	05/02/2016 (denied)	09/29/2016 (denied)	Affirming the PTAB’s affirmance of the PTO examiner’s rejection of claims to conducting a wagering game. Held that the claims were directed to the abstract idea of “rules for playing a wagering game and use conventional steps of shuffling and dealing a standard deck of cards,” with no inventive concept.

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<p><i>In re Brown</i>, 645 F. App'x 1014 (Fed. Cir. 2016) (non-precedential)</p> <p>*appeal from a PTO examiner's rejection</p>	04/22/2016	No petition found	No petition found	Affirming the PTAB's affirmance of the PTO examiner's rejection of claims to cutting hair. Held that the claims were directed to the abstract idea of "assigning hair designs to balance head shape," with no inventive concept.
<p><i>In re: Douglas T. Chorna</i>, 656 F. App'x 1016 (Fed. Cir. 2016) (non-precedential)</p> <p>*appeal from a PTO examiner's rejection</p>	08/10/2016	No petition found	No petition found	Affirming the PTAB's affirmance of the PTO examiner's rejection of financial tracking instrument claims on the basis of patent eligibility. Held that the claims were directed to the abstract idea of "a financial instrument, which, at its source, is an agreement—a meeting of the minds, between the parties each having an interest in monetary value being traded." Held that the claims lacked an inventive concept because they employed only generic computing technology.
<p><i>Apple, Inc. v. Ameranth, Inc.</i>, 842 F.3d 1229 (Fed. Cir. 2016)</p>	11/29/2016	No petition found	No petition found	Affirming-in-part and reversing-in-part a PTAB final written decision regarding claims for generating a second menu from a first menu by selecting certain categories and information from the first menu. Held that the claims were directed to the abstract idea of "systems including menus with particular features." Held that the claims did not "claim a particular way of programming or designing the software to

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				create menus that have these features,” and instead “merely claim[ed] the resulting systems” and the “functionality” of “generat[ing] menus with certain features” and were “not directed to a specific improvement in the way computers operate.” Held that the claims lacked an inventive concept, as they “merely claim[ed] the addition of conventional computer components to well-known business practices.” Noted that the patentee had even “conceded that it had not invented” certain elements of dependent claims.
<p><i>In re: Angadbir Singh Salwan</i>, 681 F. App’x 938 (Fed. Cir. 2017) (non-precedential)</p> <p>*appeal from a PTO examiner’s rejection</p>	03/13/2017	04/11/2017 (denied)	08/01/2017 (denied)	Affirming the Board’s decision holding as ineligible claims reciting methods of transferring a patient’s health information. Held that the claims were directed to the abstract idea of “billing insurance companies and organizing patient health information.” Held that the claims lacked an inventive concept because they only required generic computers functioning in a conventional manner to implement the abstract idea.
<p><i>Credit Acceptance Corp. v. Westlake Servs.</i>, 859 F.3d 1044 (Fed. Cir. 2017)</p>	06/09/2017	No petition found	No petition found	Affirming the PTAB’s decision that claims relating to “provid[ing] financing for allowing a customer to purchase a product selected from an inventory of products

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				maintained by a dealer” were ineligible. Held that the claims were directed to the abstract idea of “processing an application for financing a purchase.” Held that the claims lacked an inventive concept, as they merely required generic computers and did not provide details as to any non-conventional software for enhancing the financial process.
<i>Audatex N. Am., Inc. v. Mitchell Int’l, Inc.</i> , 703 F. App’x 986 (Fed. Cir. 2017) (non-precedential)	07/27/2017	No petition found	No petition found	Affirmed the PTAB’s decision that claims relating to a “system and method for processing work products for vehicles via the world wide web” were ineligible. Held that the claims were directed to the abstract idea of “providing a vehicle valuation through the collection and use of vehicle information.” Held that the claims lacked an inventive concept because they “neither improve[d] the technological infrastructure nor provide[d] solutions to challenges particular to the Internet.”
<i>Return Mail, Inc. v. U.S. Postal Service</i> , 868 F.3d 1350 (Fed. Cir. 2017)	08/28/2017	10/12/2017 (denied)	05/14/2018 (granted 10/26/2018; argued 02/19/2019; decided 6/10/2019, reversed and remanded on other	Reversed the PTAB’s decision that claims relating to encoding information “indicating whether the sender wants a corrected address to be provided for the addressee” were patent-eligible. Held that the claims are directed to the abstract idea of “relaying mailing address data.” Held that the claims

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			grounds, 139 S. Ct. 1853)	lacked an inventive concept, as they “only recite[d] routine, conventional activities such as identifying undeliverable mail items, decoding data on those mail items, and creating output data.”
<i>Zuili v. Google LLC</i> , 722 F. App’x 1027 (Fed. Cir. 2018) (non-precedential)	02/09/2018	02/23/2018 (denied)	No petition found	Affirming the PTAB’s decision that claims relating to identifying invalid clicks for online pay-per-click advertisers were ineligible. Held that the claims were directed to the abstract idea of “collecting, transmitting, analyzing, and storing data to detect fraudulent and/or invalid clicks based on the time between two requests by the same device or client,” and lacked an inventive concept because they merely required generic computer implementation to carry out the abstract idea.
<i>In re: Eberra</i> , 730 F. App’x 916 (Fed. Cir. 2018) (non-precedential) *appeal from a PTO examiner’s rejection	05/04/2018	No petition found	No petition found	Affirming the Board’s rejection of the claims, which were directed to a “business method for providing a television network ‘that requires the masses of the general public to purchase products in exchange for being allowed to perform in television programs shown on the network,’” as ineligible. Held that the claims were directed to the abstract idea of “promoting the purchase of a product with the incentive being a spot in a television program, i.e.

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				product promotion,” with no inventive concept.
<i>In re George Mizhen Wang</i> , 737 F. App’x 534 (Fed. Cir. 2018) (non-precedential) *appeal from a PTO examiner’s rejection	06/20/2018	No petition found	09/18/2018 (denied)	Upheld the PTAB’s affirmance of an examiner’s rejection on the basis that claims to a phonetic symbol system were ineligible. Held that the claims to a phonetic symbol system did not cover anything concrete, a method, or a process, and instead were directed to an abstract idea with no inventive concept.
<i>In re: Mario Villena</i> , 745 F. App’x 374 (Fed. Cir. 2018) (non-precedential) *appeal from a PTO examiner’s rejection	08/29/2018	09/07/2018 (denied)	01/28/2019 (denied)	Upheld the PTAB’s affirmance of an examiner’s rejection on the basis that claims to creating and maintaining a database of real estate information were ineligible. Held that the claims were directed to the abstract idea of property valuation. Held that the claims lacked an inventive concept, as they required only generic computer components.
<i>In re: Robert E. Downing</i> , 754 F. App’x 988 (Fed. Cir. 2018) (non-precedential)	12/07/2018	01/02/2019 (denied)	No petition found	Affirming an examiner’s rejection of patent claims directed to personal management information systems, on the basis that the claims were ineligible. Held that the claims were directed to the “concept of personal management, resource planning, or forecasting,” with no inventive concept.

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<p><i>In re: Marco Guldenaar Holding B.V.</i>, 911 F.3d 1157 (Fed. Cir. 2018)</p> <p>*appeal from a PTO examiner’s rejection</p>	12/28/2018	02/11/2019 (denied)	No petition found	<p>Affirming an examiners’ rejection of patent claims directed to a method of playing a dice game with a particular set of dice. Held that the claims were directed to the abstract idea of “rules for playing a dice game,” with no inventive concept.</p> <p>Judge Mayer concurred, stating that he “cannot agree with the court when it states that the patent eligibility inquiry ‘may contain underlying issues of fact.’” Stated that, “[t]ellingly, the Supreme Court has taken up our subject matter eligibility challenges in recent years, but has never once suggested that the section 101 calculus includes any factual determinations.” Also stated that “[s]ignificantly, moreover, the Court has never suggested that the ‘clear and convincing’ standard applies in eligibility determinations, a standard which would almost certainly be implicated if eligibility were a fact-intensive inquiry.” Stated that <i>Berkheimer</i> therefore “deviated from precedent when it concluded that statements made by a patentee in the specification were sufficient to raise a genuine issue of material fact regarding whether claimed elements were conventional.”</p>

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<i>Trading Techs. Int'l, Inc. v. IBG LLC</i> , 921 F.3d 1084 (Fed. Cir. 2019)	04/18/2019	No petition found	09/16/2019 (denied)	Affirming the Board's determination that the claims at issue, which were directed to a graphical user interface for electronic trading, were ineligible. Held that certain claims were directed to the abstract idea of "graphing bids and offers to assist a trader to make an order," with no inventive concept. Held other claims were directed to the abstract idea of "receiving a user input to send a trade order," with no inventive concept.
<i>In re: Paul Morinville</i> , 767 F. App'x 964 (Fed. Cir. 2019) (non-precedential) *appeal from a PTO examiner's rejection	04/29/2019	No petition found	No petition found	Affirming the rejection of claims directed to "dynamically and selectively generating a hierarchical operating organization structure," on the basis that the claims were ineligible. Held that the claims were directed to the abstract idea of "reorganizing an organization in conformity with function," with no inventive concept.
<i>Trading Techs. Int'l, Inc. v. IBG LLC</i> , 921 F.3d 1378 (Fed. Cir. 2019)	04/30/2019	No petition found	No petition found	Affirming the Board's determination that the claims at issue, which were directed to displaying market information on a screen, were ineligible. Held that the claims were directed to the abstract idea of "providing a trader with additional financial information to facilitate market trades," with no inventive concept.

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<i>Trading Techs. Int'l, Inc. v. IBG LLC</i> , 767 F. App'x 1006 (Fed. Cir. 2019) (non-precedential)	05/21/2019	No petition found	10/18/2019 (denied)	Affirming the Board's determination that the claims at issue were not patent-eligible, holding that although "these patents provide different information than the patents in <i>IBGI</i> and <i>IBGII</i> " (<i>Trading Techs. Int'l, Inc. v. IBG LLC</i> , 921 F.3d 1084 (Fed. Cir. 2019) (<i>IBG I</i>); <i>Trading Techs. Int'l, Inc. v. IBG LLC</i> , 921 F.3d 1378 (Fed. Cir. 2019) (<i>IBG II</i>)), they were not distinguishable for purposes of patent eligibility.
<i>In re: Mark Alfred Greenstein</i> , 774 F. App'x 661 (Fed. Cir. 2019) (non-precedential)	06/10/2019	07/23/2019 (denied)	No petition found	Affirmed the Board's determination that the patent claims, which related to solving the financial risk of outliving one's savings, were correctly rejected by the Examiner because they were ineligible. Held that the claims were directed to the abstract idea of "allocating returns to different investors in an investment fund, a fundamental business practice that long predates computer technology," with no inventive concept.
<i>In re: Roman Gitlin</i> , 775 F. App'x 689 (Fed. Cir. 2019) (non-precedential)	06/13/2019	No petition found	No petition found	Affirmed the Board's determination that the patent claims, which related to a "method for efficiently implementing a multi-dimensional interpolation," were correctly rejected by the Examiner on the basis that they were ineligible. Held that the claims were directed to a mathematical concept (interpolation), with no inventive concept.

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
<p><i>In re: Mark Alfred Greenstein</i>, 778 F. App'x 935 (Fed. Cir. 2019) (non-precedential)</p> <p>*appeal from a PTO examiner's rejection</p>	07/12/2019	08/23/2019 (denied)	No petition found	Affirming the Board's determination that the patent claims, which were directed to "methods for providing recommendations over the Internet for products or services," were ineligible. Held that the claims were directed to mitigating settlement risk in financial transactions, with no inventive concept.
<p><i>In re: Mark Alfred Greenstein</i>, 782 F. App'x 1035 (Fed. Cir. 2019) (non-precedential)</p> <p>*appeal from a PTO examiner's rejection</p>	09/06/2019	No petition found	No petition found	Affirming the Board's determination that the patent claims, which were directed to automated systems for personal financial planning, were ineligible. Held that the claims were directed to the abstract idea of "adjusting the amount a person saves and choosing investments for the saved amounts, with the goal of saving enough for retirement," with no inventive concept.
<p><i>In re: Mark Alfred Greenstein</i>, 792 F. App'x 941 (Fed. Cir. 2019) (non-precedential)</p> <p>*appeal from a PTO examiner's rejection</p>	12/10/2019	01/22/2020 (denied)	No petition found	Affirming the Board's determination that the patent claims, which were directed to a "computer-conducted method of 'assigning and managing the rights to receive taxes when amounts are disbursed from tax-advantaged accounts for which a prior deduction has been received,'" were ineligible. Held that the claims were directed to the abstract idea of "exchanging consideration for a right to receive future payments, as well as managing the amounts

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				of those future payments,” with no inventive concept.
<i>Customedia Techs., LLC v. Dish Network Corp.</i> , 951 F.3d 1359 (Fed. Cir. 2020)	03/06/2020	05/05/2020 (denied 06/09/2020)	Time to file still pending	Affirming the Board’s determination that the claims, which were directed to “data management and processing systems,” were ineligible. Noted that it is “not enough . . . to merely improve a fundamental practice or abstract process by invoking a computer merely as a tool.” Held that the claims “merely recite[d] reserving memory to ensure storage space is available for at least some advertising data,” and that the “specification [was] silent as to any specific structural or inventive improvements in computer functionality related to this claimed system.” Further stated that the “only improvements identified in the specification are generic speed and efficiency improvements inherent in applying the use of a computer to any task.” Held that the claims were directed to the abstract

CASE	DATE	PETITION FOR REHEARING EN BANC	PETITION FOR WRIT OF CERTIORARI	HOLDING
				idea of “targeted advertising wherein a computer is merely used as a tool,” with no inventive concept. Noted that the “invocation of ‘already-available computers that are not themselves plausibly asserted to be an advance . . . amounts to a recitation of what is well-understood, routine, and conventional.’”
<i>In re: C. Douglass Thomas</i> , 800 F. App’x 922 (Fed. Cir. 2020) (non-precedential)	04/08/2020	No petition found	No petition found	Affirming the Board’s determination that the patent claims at issue were ineligible. Held that the claims were directed to the abstract idea of “alerting by notification message notice of a new publication indicated as relevant to the notified,” without an inventive concept.
<i>In re: Steve Morsa</i> , 809 F. App’x 913 (Fed. Cir. 2020) (non-precedential) *appeal from a PTO examiner’s rejection	04/10/2020	05/13/2020 (denied) 06/11/2020)	Time to file still pending	Affirming the Board’s determination that the patent claims at issue were ineligible. Held that the claims were directed to the abstract idea of “targeting advertisements for a user, and using a bidding system to determine how the advertisements will be displayed,” with no inventive concept.

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<i>Bozeman Financial LLC v. Federal Reserve Bank</i> , 955 F.3d 971 (Fed. Cir. 2020)	04/10/2020	04/30/2020 (denied 06/3/2020)	Time to file still pending	Affirming the Board’s CBM review decision holding ineligible patent claims directed to authorizing and clearing financial transactions to detect and prevent fraud. Held that the claims were directed to the abstract idea of “collecting and analyzing information for financial transaction fraud or error detection,” with no inventive concept.
<i>In re: Suresh Gopalan</i> , 809 F. App’x 942 (Fed. Cir. 2020) (non-precedential) *appeal from a PTO examiner’s rejection	04/13/2020	No petition found	No petition found	Affirming the Board’s determination that the patent claims at issue, which related to methods and systems for designing measurement strategies, were ineligible. Held that the claims were directed to the abstract idea of “using algorithms or mathematical relationships to devise a measurement strategy for spectrally based measurements,” with no inventive concept.
<i>In re: Christopher John Rudy</i> , 956 F.3d 1379 (Fed. Cir. 2020) *appeal from a PTO examiner’s rejection	04/24/20	06/08/2020 (pending)	Time to file still pending	Affirming the Board’s determination that the patent claims at issue, which related to certain types of fishing hooks, were ineligible. As an initial matter, held that the PTO’s eligibility guidance is not “binding in our patent eligibility analysis.” Held that the claims were directed to the abstract idea of “selecting a fishing hook based on observed water conditions,” with no inventive concept.

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<p><i>In re: Bernard Jobin</i>, 811 F. App'x 633 (Fed. Cir. 2020) (non-precedential)</p> <p>*appeal from a PTO examiner's rejection</p>	05/08/2020	No petition found	Time to file still pending	<p>Affirming the Board's determination that the patent claims at issue, which related to methods and systems for "developing products, advertisements, games, and other creative realizations," were ineligible. Held that the claims were directed to the abstract idea of "collection, organization, grouping, and storage of data using techniques such as conducting a survey or crowdsourcing," with no inventive concept."</p>
<p><i>In re: Michael J. Rosenberg</i>, 813 F. App'x 594 (Fed. Cir. June 4, 2020) (non-precedential)</p> <p>*appeal from a PTO examiner's rejection</p>	06/04/2020	No petition found	Time to file still pending	<p>Affirming the PTAB's determination that the claims, which recited "collect[ing] performance-related data about a clinical trial, analyz[ing] that data, and report[ing] on whether any adjustments should be made to the clinical trial based on the review of the collected data," were ineligible. Held that the claims were directed to the "basic idea of deciding whether to finetune a given system (here, a clinical trial) based on reviewing the system's performance data," with no inventive concept. Noted that, "[i]n past cases, we have held claims focused on collecting and analyzing certain information and then reporting the results of that analysis are directed to an abstract idea."</p>

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				<p>Finally, noted that “The ability to make assessments more quickly to provide instructions on whether to modify a clinical trial is at best an improvement on an abstract process itself and not a technical improvement, given the broad, non-specific nature of the claim.”</p>

APPENDIX B

[SEE CHART ON NEXT PAGE]

Federal Circuit Judge Votes on Post-Alice Patent-Eligibility Decisions (as of June 19, 2020)

Judge	Alice	Eligible	Ineligible (Precedential)			Ineligible (Non-Precedential)	
Prost	P	Rapid Litigation (A)	Affinity Labs I, Affinity Labs II, Return Mail (A), University of Florida Research	ChargePoint (A), BRCAI/BRCAII, Genetic Tech., Audatex (A), Erie (A), Erie II, Cap. One Fin. (A)	Secured Mail, Vanda (D), TCL (A), Rudy (A), ShoppersChoice (A), Customedia	Allvoice, Tranxition (A), Prism (A), Ebera, Villena, Bridge and Post (A), Greenstein III, Brown, Smartflash (A), Coffelt, Zuili, Maxon	Uniloc, INO Therapeutics (A), Domino's Pizza, Whitserve, Dropbox
Newman	Dissent	Amdocs, Bascom (C), Trading (A/NP), Return Mail (D), Athena (D), INO Therapeutics (D, NP), TCL (D)	Internet Patents (A), Versata, Voter Verified			Smartflash, Greenstein III, Morsa, Morinville, Greenstein IV (A)	
Mayer	N/A		Ultramercial, OIP Tech. (C), IBG I, Symantec (C)	DDR Holdings (D), Westlake, Gulenaar (C)		I/P Engine (C), IBG III, Ubisoft	
Plager	N/A	Amdocs (A), CardioNet	FairWarning, Versata (A), Interval Licensing (C-I-P)			Morinville, Domino's Pizza	
Lourie	P	Vanda (A), Cellspin, Illumina	FairWarning, Mentor, Investpic, SRI (D), Chamberlain, Synopsys, RecogniCorp, Two-Way Media	Innovation Sciences, Bozeman, Ultramercial (A), Cleveland	Voter Verified (A), Athena (A), MyMail (D)	TDE Petroleum, Smartflash, Move, Prism, Glasswall, Bridge and Post, Evolutionary (A), Clarilogic, EasyWeb, Downing (A)	Cleveland II (A), Greenstein (A), Greenstein II, Ubisoft
Clevenger	N/A	Endo	BRCAI/BRCAII, Securd Mail, IBG II			Vehicle Intelligence, Burnett, Gopalan	
Schall	N/A		TLI			LendingTree (A), Prism, Symantec II, Wang, Thomas	
Bryson	N/A	Exergen (NP) Data Engine Bridge and Post (C-I-P, D-I-P)	Affinity Labs I (A), Affinity Labs II (A), Data Engine, Gulenaar, Elec. Power			Planet Bingo, Downing, Coffelt, Bridge and Post (C-I-P, D-I-P)	
Linn	C/D	Chicago Transit (D-I-P) Finjan	Ariosa (C), Chicago Transit (C-I-P), IBG I			Shortridge, IBG III, Glasswall (A), Uniloc (A)	
Dyk	P	Finjan, Ancora, Gemalto, Boehringer, CardioNet (C-I-P)	BRCAI/BRCAII (A), Content Extraction, Capital One (A), Genetic Tech. (A), Symantec (A)	TLI, Westlake (A), American Axle (A), Bozeman	ShoppersChoice, Customedia	Allvoice, Ebera, Domino's Pizza (A), Thomas, Downing, INO Therapeutics, Greenstein IV, Morsa	British Telecommunications, Rosenberg
Moore	C/D	Enfish, Rapid Litigation Thales (A), Core Wireless (A) Berkheimer (A, A-I-P) Aatrix (A, V), Exergen (A, NP), Natural Alternatives (A), American Axle (D), Boehringer (A), Illumina, Uniloc USA (A)	Digitech, Internet Patents, University of Florida Research (A), Innovation Sciences (A)	Synopsys, Mentor (A), IBG I (A), Smith, Berkheimer (A, V-I-P), IBG II (A)	Bozeman (A), Customedia (A)	LendingTree, Vehicle Intelligence, Cleveland II, Morinville, Greenstein, Brown, Evolutionary, EasyWeb, Coca-Cola, Uniloc, Greenstein III	Gopalan, Uniloc 2017 (A)
O'Malley	C/D	Bascom, Trading (NP) Visual Memory, Core Wireless, SRI, Cellspin (A), MyMail	Mortgage Grader, Audatex, Investpic	Roche (C), Ultramercial, Chamberlain, Rudy		Allvoice (A), LendingTree, Ebera, Greenstein II, Whitserve, Shortridge, Symantec II (A), Burnett, Thomas, Jobin, Uniloc 2017	
Reyna	P	McRO (A), Aatrix (V), Data Engine, Natural Alternatives (CIP, DIP), MyMail (A), Uniloc USA	Ariosa (A), Amdocs (D), RecogniCorp (A), Two-Way Media (A), BuySeasons, Data Engine	Ameranth (A), Capital One, Westlake, Chicago Transit, Voter Verified, Roche (A), Digitech (A)	Internet Patents, Cleveland (A), Secured Mail (A), Erie II, ChargePoint, Illumina (D)	Tranxition, Vehicle Intelligence, Wang, Reese (A), Gitlin, Clarilogic (A), Zuili, Burnett, Greenstein IV, Ubisoft (A)	
Wallach	P	DDR Holdings, Trading (NP) Thales, Core Wireless, Ancora, Natural Alternatives, Endo	Affinity Labs I, Affinity Labs II, Return Mail, BuySeasons, Genetic Veterinary Servs. (A)	Ariosa, Erie, Chicago Transit (A), University of Florida Research	Cap. One Fin., Cleveland, Erie II (A), IBG II, ShoppersChoice	TDE Petroleum, Coffelt, West View (A), VOIT (A), Morsa, Zuili (A), Coca-Cola, Move, Symantec II, Cleveland II, Jobin, Rosenberg	Dropbox
Taranto	N/A	Enfish, McRO, Berkheimer (A-I-P), Aatrix (V), Ancora (A), Cellspin, Uniloc USA	buySAFE (A), Content Extraction, Berkheimer (V-I-P), American Axle, Genetic Tech., Elec. Power (A)	Interval Licensing, Mortgage Grader, OIP Tech., Investpic (A)	ChargePoint, Rudy	Planet Bingo, Evolutionary, Glasswall, VOIT, Greenstein, Whitserve (A), Jobin, Uniloc 2017	British Telecommunications (A)
Chen	N/A	Bascom (A) DDR Holdings (A) Gemalto (A)	Ameranth, Capital One, Interval Licensing (A), Guldenaar (A), Chamberlain (A)	Content Extraction (A), Synopsys (A), Audatex, Innovation Sciences	Erie, Cap. One Fin., Mentor, Solutran (A), TCL	Tranxition, West View, Gitlin, Clarilogic, Greenstein II (A), Gopalan (A), Rosenberg (A)	
Hughes	N/A	Enfish (A) Finjan Vanda Boehringer	buySAFE, Digitech, BuySeasons (A), Genetic Veterinary Servs. (A), OIP Tech. (A), TLI (A), Roche	Smith, Visual Memory (D), Two-Way Media, Solutran		Planet Bingo (A), TDE Petroleum (A), Exergen (D), Villena, Gitlin, Versata, EasyWeb (A), Maxon (A), IBG III (A), Reese	British Telecommunications, Dropbox (A)
Stoll	N/A	McRO, Rapid Litigation Symantec (D), Thales Visual Mem. (A) Berkheimer (A-I-P), Data Engine (A), SRI (A) Endo (A), Gemalto, CardioNet (A)	Ameranth, Elec. Power, Berkheimer (V-I-P), Genetic Veterinary Servs. (A), FairWarning (A)	Symantec, Data Engine (A), Smith (A), RecogniCorp, Athena, Solutran		Shortridge, West View, Move (A), Villena (A), Reese, Coca-Cola (A), Maxon, Wang, VOIT, Brown	

Legend:
 • A = Author
 • A-I-P = Affirm in Part
 • C = Concurrence; C-I-P = Concurrence in Part
 • D = Dissent; D-I-P = Dissent in Part
 • NP = Non-precedential
 • V = Vacate; V-I-P = Vacate in Part