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The Federal Circuit's Treatment of Rule 12 Dismissals for Lack of Patent Eligible Subject Matter

Andrew Kanel

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**THE FEDERAL CIRCUIT’S TREATMENT OF RULE 12
DISMISSALS FOR LACK OF PATENT ELIGIBLE SUBJECT
MATTER**

*Andrew Kanel**

Abstract.....	1055
I. Introduction	1056
II. The Development of Patent Subject Matter Eligibility Law	1058
A. The Statutory Basis for Patent Subject Matter Eligibility	1058
B. The Interpretation of Subject Matter Eligibility Law by the Supreme Court	1060
1. The Supreme Court began analyzing the eligibility of software and biotechnology during the 1970s and 1980s.	1060
2. The Supreme Court began narrowing the scope of subject matter eligibility in <i>Bilski v. Kappos</i>	1062
3. The Supreme Court introduced the two-part eligibility test in <i>Mayo Collaborative Services v. Prometheus Laboratories</i>	1063
4. The Supreme Court established Mayo’s two-step test as the test for subject matter eligibility in <i>Alice Corp. v. CLS Bank International</i>	1065
III. The Federal Circuit’s Treatment of Subject Matter Eligibility During Rule (12)(b)(6) and (12)(c) Motions.....	1068
A. The Changing Treatment of Rule (12)(b)(6) and 12(c) Motions at the Federal Circuit During the <i>Mayo</i> and <i>Alice</i> Decisions.....	1068

* Andrew Kanel, J.D., The University of Akron School of Law, December 2019. I would like to thank my father, Jeff Kanel, and his inventive nature for inspiring me to study patent law. I would also like to thank my colleagues at the *Akron Law Review* for their efforts in editing this article.

1. The first *Ultramercial* decision exemplifies the Federal Circuit’s treatment of motions to dismiss for lack of eligibility before the *Mayo* and *Alice* decisions. 1069
 2. The second *Ultramercial* decision outlined several policy reasons for refraining from eligibility determinations on the pleadings.. 1070
 3. The third *Ultramercial* decision shows how the *Alice* test changed the Federal Circuit’s treatment of dismissals for lack of eligibility on the pleadings..... 1072
 - B. The Federal Circuit’s Treatment of Rule 12(b)(6) and 12(c) Motions for Subject Matter Ineligibility After *Alice* 1074
 1. The Federal Circuit reversed a dismissal for lack of eligibility and discussed the place of eligibility determinations in litigation..... 1074
 2. The Federal Circuit reversed two decisions of ineligibility without additional guidance on making eligibility determinations on the pleadings..... 1076
 - C. The Federal Circuit decided that factual allegations may prevent dismissal for lack of subject matter eligibility at the pleading stage. 1078
 1. The Federal Circuit reversed a dismissal for lack of eligibility and allowed a party to amend its complaint to make additional factual allegations favoring eligibility. 1078
 2. The Federal Circuit decided not to rehear *Aatrix* en banc, sparking discussion about the state of subject matter eligibility jurisprudence. 1080
 - D. The Federal Circuit’s Treatment of Rule 12(b)(6) and 12(c) Motions for Subject Matter Ineligibility after *Aatrix* 1082
 1. The Federal Circuit has continued affirming dismissals for lack of subject matter eligibility after *Aatrix*. 1082
 2. The Federal Circuit has reversed dismissals for lack of subject matter eligibility in five cases after the *Aatrix* decision..... 1083
- IV. Analysis of the Federal Circuit’s Treatment of

Eligibility Decisions on the Pleadings and
 Recommendation that the Federal Circuit Discourage
 Early Dismissals for Lack of Eligibility 1085

A. The Supreme Court’s decisions in *Mayo* and *Alice*
 disrupted The Federal Circuit’s treatment of
 Subject Matter Eligibility at the Rule 12 Stage. 1086

1. The litigation in *Ultramercial* displays how the
 two-part eligibility test changed the way the
 Federal Circuit examines eligibility on the
 pleadings. 1086

2. After *Mayo* and *Alice*, the number of motions to
 dismiss for lack of eligibility increased
 sharply. 1087

3. The Federal Circuit usually affirms pleading
 stage dismissals for lack of eligibility. 1088

4. *Aatrix* may signal a return to the reasoning
 against deciding eligibility on the pleadings
 outlined in the second *Ultramercial*
 decision. 1089

B. The Federal Circuit’s current application of the
Alice test at the Rule 12 stage favors alleged
 infringers. 1090

C. The Federal Circuit’s application of the *Alice* test at
 the Rule 12 stage is not consistent with the
 standards for evaluating the sufficiency of
 pleadings. 1092

D. The *Alice* test is not conducive to implementation at
 the Rule 12 stage when the record is
 undeveloped.
 1094

V. Conclusion 1096

ABSTRACT

After the Supreme Court’s decision in Alice Corp. v. CLS Bank, there has been an increase in Federal Rule of Civil Procedure (Rule) 12 motions to dismiss for lack of patentable subject matter. These motions are often granted at the district court level and are predominantly upheld by the U.S. Court of Appeals for the Federal Circuit (Federal Circuit). This trend creates a hostile environment for inventors and patent holders

and threatens to curb innovation in various areas including computer software, biotechnology, and medical diagnostics. The Federal Circuit's current application of the Alice test at the Rule 12 stage favors alleged infringers and is inconsistent with the standards for evaluating pleadings. Additionally, the Alice test is not conducive to being performed at the pleading stage of litigation. This paper argues that the Federal Circuit should instruct the district courts to refrain from deciding patent subject matter eligibility at the pleading stage of litigation.

I. INTRODUCTION

On October 25, 1994, the United States Patent and Trademark Office (USPTO) granted a patent to John R. Gammino titled “Telecommunications Device with Simplified Calling Procedures.”¹ Mr. Gammino’s patent disclosed a method for making telephone calls where the call is routed through a central office that determines the method of payment for the call.² In May 2012, Mr. Gammino sued AT&T Corp., Verizon Communications, Inc., Sprint Communications Co., and others in the telecommunications space for infringing his patent.³ After surviving motions to dismiss and amending his complaint, Mr. Gammino was met with a Federal Rule of Civil Procedure (Rule) 12(c) motion for judgment on the pleadings on January 5, 2015.⁴ The defendants alleged the patent was directed to ineligible subject matter under 35 U.S.C. § 101.⁵ The court performed the *Alice* test and determined all the claims ineligible under § 101.⁶ As a result, Mr. Gammino’s patent was held invalid, and he lost all rights associated with it.

Invalidation of a patent has serious consequences for the inventor.⁷ The inventor not only loses the case at hand but also loses the right to exclude others from practicing the patented invention in the future.⁸ The

1. U.S. Patent No. 5,359,643, at [45], [54], and [76] (filed Jan. 26, 1993).

2. *Id.* at col. 1 ll. 40–52.

3. Gammino v. Am. Tel. & Tel. Co., 127 F. Supp. 3d 264, 266 (D. Del. 2015).

4. *Id.* at 267 (“On January 5, 2015, Defendants filed their Motion for judgment of patent ineligibility under § 101 pursuant to Rule 12(c) of the Federal Rules of Civil Procedure.”).

5. *Id.*

6. *Id.* at 275 (“[C]laim 1—and, thus, all claims of the ‘643 patent—is ineligible under § 101, because it is directed to an abstract idea and includes no inventive concept under *Mayo/Alice*.”).

7. Paul R. Gugliuzza, *Quick Decisions in Patent Cases*, 106 GEO. L.J 619, 628 (2018) (“A ruling of patent invalidity is the outcome of a patent case that can have the most significant impact going forward, both on the parties and on nonparties.”).

8. *Id.* (“[O]nce a litigant convinces a court to hold a particular patent invalid, any litigant accused of infringing the same patent in the future may use that invalidity decision as a complete defense.”).

fact that invalidation of a patent can occur at the Rule 12 stage creates a hostile environment for patent holders and inventors and, as a result, harms innovation.

Section 101 defines the subject matter that is eligible for patent protection.⁹ The Supreme Court's decisions in *Mayo Collaborative Services v. Prometheus Laboratories*¹⁰ and *Alice Corp. v. CLS Bank International*¹¹ redesigned the test for determining whether subject matter is eligible for patenting. This test, the *Alice* test, has brought uncertainty into the subject matter eligibility analysis and has become unpopular with inventors, practitioners, and judges.¹²

Before *Alice*, motions to dismiss on patent ineligibility grounds were rarely brought and rarely granted.¹³ After *Alice*, Rule 12 motions based on subject matter eligibility dramatically increased. In 2013, the year before *Alice* was decided, district courts decided 11 pleading stage eligibility motions.¹⁴ In 2015, the year after *Alice*, that number rose to 101.¹⁵ This increase is not surprising. Patent litigation is expensive and time consuming, making the opportunity for an early decision appealing to defendants and judges.¹⁶

Eligibility decisions on the pleadings create an uncertain and hostile environment for inventors and patent owners. Despite the presumption of validity for patents and the practice of taking all alleged facts in the complaint as true when examining motions under Rule 12(b)(6) and Rule 12(c), these early decisions invalidate patents at an alarming rate.¹⁷ In

9. 35 U.S.C. § 101 (2018) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor . . .”).

10. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012).

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

12. Meredith Addy, *Alice at Age Four: Time to Grow Up*, IPWATCHDOG (Sep. 18, 2018), <https://www.ipwatchdog.com/2018/09/18/alice-age-four-grow-up/id=101447/> [<https://perma.cc/EZ9Q-2TSD>] (characterizing the *Alice* decision as much-maligned and stating that over emphasizing the § 101 analysis causes confusion, which stalls innovation).

13. Stephanie E. O’Byrne & Jeffrey T. Castellano, *On Trend: Rule 12 Dismissals Based on Patent Ineligibility under § 101*, 23 FED. CIR. B.J. 405, 408 (2014) (noting that the Federal Circuit stated that “Rule 12(b)(6) dismissal for patent ineligibility would be improper in most cases”).

14. Gugliuzza, *supra* note 7, at 660 (“In 2016, district courts decided 149 pleading-stage eligibility motions, up from 101 in 2015, 24 in 2014, and 11 in 2013.”).

15. *Id.*

16. Addy, *supra* note 12 (“Patent cases are notoriously complicated and difficult to resolve. Sadly, *Alice*’s novel allure of an early dismissal enticed the district courts time and again to ignore established practices. *Alice* allowed judges to blithely bypass unpacking specific statutory sections, avoid application of patent precedent to complicated technologies, and ignore interpretation of patent claim terms.”).

17. *Id.* (explaining that about 60% of district court decisions addressing eligibility found ineligible claims; stating that about 74% of those invalidations resulted from Rule 12(b)(6) or Rule

turn, the invalidations are consistently upheld on appeal by the Federal Circuit on an undeveloped record.¹⁸

This article argues that the Federal Circuit should provide guidance against deciding eligibility at the pleading stage of litigation. Part II of this article begins with an overview of the statutory basis for patent subject matter eligibility. This part continues with a discussion of the development of subject matter eligibility law at the Supreme Court. Once this groundwork is laid, Part III examines the Federal Circuit's treatment of Rule 12(b)(6) and Rule 12(c) motions alleging a lack of subject matter eligibility. This examination includes analysis of several cases to gain insight into the development of subject matter eligibility law and the reasoning behind the Federal Circuit's decisions. Part IV explains why patent subject matter should not be decided at the motion to dismiss stage of litigation. This discussion analyzes the impact of an invalidity ruling on the patentee; the consistency of the Federal Circuit's treatment of the *Alice* test with the standards for evaluating the sufficiency of pleadings; and the ability of the *Alice* test to be performed in a satisfactory manner at an early stage of litigation. Part V concludes with a recommendation that courts not determine patent subject matter eligibility at the pleading stage of litigation.

II. THE DEVELOPMENT OF PATENT SUBJECT MATTER ELIGIBILITY LAW

A. *The Statutory Basis for Patent Subject Matter Eligibility*

Patent law finds its basis in the Intellectual Property Clause of the Constitution, which states the primary policy concern driving patent law: promoting the progress of science and the useful arts.¹⁹ This clause gave Congress the power to create the patent system, which it did in 1790.²⁰

Congress defined patent subject matter eligibility by listing categories of eligible subject matter. The four statutory categories of

12(c) motions; and questioning “[h]ow does this happen when a patent is presumed valid? And, when factual issues under Rule 12 are supposed to be resolved in favor of the patentee?”).

18. *Id.* (“57 of the 122 appeals of district court invalidations, received opinions from the Federal Circuit. The rest received the dreaded ‘Rule 36 Affirmance,’ . . .”) (citation omitted).

19. JANICE M. MUELLER, *PATENT LAW* 37 (5th ed. 2016) (“Congressional power to establish a patent system derives from the Intellectual Property (IP) Clause of the U.S. Constitution.”); U.S. CONST. art. 1, § 8, cl. 8 (“To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries . . .”).

20. PETER S. MENELL ET AL., *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE*: 2017 157 (2017) (“The first U.S. patent statute was passed in 1790.”). This patent statute was one of the first acts of the First Congress, demonstrating the importance of the patent system. *Id.*

patentable subject matter first appeared in the Patent Act of 1793.²¹ The original four categories were any “art, machine, manufacture or composition of matter.”²² Congress changed the word *art* to *process* in the Patent Act of 1952 to increase the clarity of the statute.²³ Patent subject matter eligibility is currently codified in 35 U.S.C. § 101,²⁴ which has remained unchanged since the Patent Act of 1952.²⁵ Apart from the renaming of one category in the 1952 Act, the four statutory categories have remained consistent since 1793.²⁶

Given the consistency of the statutory language, changes to patent subject matter eligibility came through developments at common law.²⁷ The statutory definition of patent eligible subject matter is broad. The legislative history of the Patent Act of 1952 explains that “everything under the sun made by man” is meant to be patent eligible subject matter.²⁸ The courts have narrowed this definition by creating judicial exceptions to subject matter eligibility.²⁹ The judicial exceptions include laws of nature, abstract ideas, and natural phenomena.³⁰ Subject matter that would be eligible under one of the four statutory categories is not patent eligible if it also falls within one of the judicial exceptions.³¹

As technology develops, the courts are often left with the difficult task of determining whether a certain innovation is patent eligible. For example, the fields of software and biotechnology have changed drastically since the Patent Act of 1952 and were not areas of innovation

21. Brady P. Gleason, Comment, *Don't Give Up Section 101, Don't Ever Give Up*, 65 CATH. U.L. REV. 773, 776 (2016).

22. Patent Act of 1793, Ch. 11, § 1 (1793).

23. Gleason, *supra* note 21, at 776 n.24 (explaining that Congress replaced the term “art” with “process” to avoid confusion).

24. 35 U.S.C. § 101 (2018) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor . . .”).

25. Gleason, *supra* note 21, at 776 (“This language remained largely unchanged until the patent laws were recodified in the 1952 Patent Act.”).

26. *Id.*

27. *Cf.* MUELLER, *supra* note 19, at 40–41 (“Since 1982, the primary source of decisional authority interpreting the patent statute and regulations is the U.S. Court of Appeals for the Federal Circuit.”).

28. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting S. REP. NO. 82-1979, at 5 (1952); H.R. REP. NO. 82-1923, at 6 (1952)).

29. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (“We have long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.”) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 676, 589 (2013)).

30. *Id.*

31. *Id.* (explaining that abstract ideas, laws of nature, and natural phenomena are the fundamental tools of scientific work and should not be monopolized in a way that hinders innovation).

in 1793. The statutory language does not give specific guidance on these technological areas, so the courts have.³² Judicial guidance on subject matter eligibility resulted in the *Alice* two-part test to determine subject matter eligibility, which is currently used by the courts and the USPTO.³³

B. The Interpretation of Subject Matter Eligibility Law by the Supreme Court

1. The Supreme Court began analyzing the eligibility of software and biotechnology during the 1970s and 1980s.

Patent subject matter eligibility issues arose with the growth of the software and biotechnology industries during the 1970s and 1980s. This led to a series of Supreme Court decisions on subject matter eligibility that provide a foundation for the Court's recent eligibility decisions, culminating with the *Alice* test.

This series began with *Gottschalk v. Benson* in 1972.³⁴ The claims in *Benson* covered a method to convert binary-coded decimal numbers into pure binary numbers.³⁵ The claims did not provide any application or hardware limitations and effectively covered all uses of the algorithm.³⁶ The Court articulated three lines of reasoning that would continue through later decisions on subject matter eligibility: scientific truths are not patentable because they are basic tools of scientific work;³⁷ an algorithm is not patentable if the effect of the patent would preempt all use of the algorithm;³⁸ and transformation of an article to a different state is a clue

32. See *id.* at 216–17 (explaining that the Court gives guidance to prevent the preemption of fundamental concepts that could hinder the development of new technology).

33. Robert Daniel Garza, *Software Patents and Pretrial Dismissal Based on Ineligibility*, 24 RICH. J.L. & TECH. no. 2, at 1, 16 (2018) (“Together, these two cases prompted a major shakeup regarding § 101 jurisprudence. In response, the USPTO issued new subject matter eligibility guidelines for examiners explaining this new *Alice* Two Step Test.”).

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

35. *Id.* at 64 (“They claimed a method for converting binary-coded decimal (BCD) numerals into pure binary numerals.”).

36. *Id.* (“The claims were not limited to any particular art or technology, to any particular apparatus or machinery, or to any particular end use.”).

37. *Id.* at 67 (“Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”).

38. *Id.* at 71–72 (“The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself.”).

to patentability.³⁹ The Court ultimately held the claimed algorithm unpatentable,⁴⁰ and the decision ended with a call to Congress to decide whether computer programs should be patentable.⁴¹

Six years later, the Supreme Court decided another patent eligibility case, *Parker v. Flook*.⁴² The claims in *Flook* were directed to a process to update alarm limits in catalytic conversion processes.⁴³ The Court reasoned that, during the eligibility analysis, the algorithm should be considered well-known and that further inventive application of the algorithm is required for patentability.⁴⁴ The claims in *Flook* failed to meet this standard and were not eligible for patenting.⁴⁵

In 1980, the Court decided a biotechnology case, *Diamond v. Chakrabarty*.⁴⁶ The inventor claimed a self-replicating bacterium that he genetically engineered to break down crude oil, making the organism useful to disperse oil spills.⁴⁷ The Court took a broad view of patentability, noting that “Congress intended statutory subject matter to ‘include anything under the sun that is made by man.’”⁴⁸ The modified bacterium was not naturally occurring and was a manufacture of the inventor; therefore, the claims were eligible.⁴⁹

39. *Id.* at 70 (“Transformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.”).

40. *Id.* at 73 (reversing the lower court’s decision of eligibility).

41. *Id.* (“If these programs are to be patentable, considerable problems are raised which only committees of Congress can manage, for broad powers of investigation are needed, including hearings which canvass the wide variety of views which those operating in this field entertain. The technological problems tendered in the many briefs before us indicate to us that considered action by the Congress is needed.”) (citations omitted).

42. *Parker v. Flook*, 437 U.S. 584 (1978).

43. *Id.* at 586 (“The patent claims cover any use of respondent’s formula for updating the value of an alarm limit on any process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons.”).

44. *Id.* at 594–95 (“Respondent’s application simply provides a new and presumably better method for calculating alarm limit values. If we assume that that method was also known, as we must under the reasoning in *Morse*, then respondent’s claim is, in effect, comparable to a claim that the formula 2πr can be usefully applied in determining the circumference of a wheel.”).

45. *Id.*

46. *Diamond v. Chakrabarty*, 447 U.S. 303 (1980).

47. *Id.* at 305 (“This human-made, genetically engineered bacterium is capable of breaking down multiple components of crude oil. Because of this property, which is possessed by no naturally occurring bacteria, Chakrabarty’s invention is believed to have significant value for the treatment of oil spills.”).

48. *Id.* at 309 (quoting S. REP. NO. 82-1979, at 5 (1952); H.R. REP. NO. 82-1923, at 6 (1952)).

49. *Id.* at 310 (“Here, by contrast, the patentee has produced a new bacterium with markedly different characteristics from any found in nature and one having the potential for significant utility. His discovery is not nature’s handiwork, but his own; accordingly it is patentable subject matter . . .”).

After the broad interpretation of eligibility in *Chakrabarty*, the Supreme Court decided *Diamond v. Diehr*, another case involving an algorithm.⁵⁰ However, the Court found the claims in *Diehr* eligible for patenting.⁵¹ The claims were directed to a method for curing synthetic rubber where the cure time was constantly updated using the Arrhenius equation and the temperature inside the mold.⁵² The Court reasoned that a process does not automatically become ineligible because it uses an algorithm or computer.⁵³ The Court distinguished the claims in *Diehr* from those in *Benson* and *Flook*, noting that the claims were directed to a specific application of an algorithm and did not preempt all use of that algorithm.⁵⁴

2. The Supreme Court began narrowing the scope of subject matter eligibility in *Bilski v. Kappos*.

The Supreme Court did not decide another subject matter eligibility case until *Bilski v. Kappos* in 2010.⁵⁵ In the intervening period, the decisions in *Charkabarty* and *Diehr* lead to broad interpretation of subject matter eligibility.⁵⁶ Business methods began enjoying patent protection, sparking debate in the patent community about how broad subject matter eligibility should be.⁵⁷ With *Bilski*, the pendulum began to swing back toward a narrow interpretation of subject matter eligibility.

50. *Diamond v. Diehr*, 450 U.S. 175 (1981).

51. *Id.* at 192–93 (“Because we do not view respondents’ claims as an attempt to patent a mathematical formula, but rather to be drawn to an industrial process for the molding of rubber products, we affirm the judgment of the Court of Customs and Patent Appeals.”).

52. *Id.* at 178 (“Respondents characterize their contribution to the art to reside in the process of constantly measuring the actual temperature inside the mold. These temperature measurements are then automatically fed into a computer which repeatedly recalculates the cure time by use of the Arrhenius equation.”).

53. *Id.* at 187 (“[A] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer.”).

54. *Id.* (“In contrast, the respondents here do not seek to patent a mathematical formula. Instead, they seek patent protection for a process of curing synthetic rubber.”).

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

56. Gleason, *supra* note 21, at 780 (“[T]he Federal Circuit, relying heavily on the language of the *Diehr* opinion, broadened the scope of § 101.”).

57. *Id.* (“[T]he Federal Circuit determined that the exception for business method claims, which were considered previously patent-ineligible subject matter, had met its demise.”) (citing *State St. Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368, 1375 (Fed. Cir. 1998)).

The claims in *Bilski* were directed to a business method for hedging against risk of price fluctuation in the commodities markets.⁵⁸ The Federal Circuit developed the machine-or-transformation test to determine eligibility, based on the decisions in *Benson*, *Flook*, and *Diehr*.⁵⁹ The Supreme Court rejected the machine-or-transformation test as the sole test for patent subject matter eligibility, stating that it is a useful clue for eligibility but not dispositive.⁶⁰ While business methods can be eligible for patenting,⁶¹ the claims in *Bilski* were not patent eligible.⁶² The Supreme Court did not articulate a test to replace the machine-or-transformation test. Instead, they pointed the lower courts to the guideposts of *Benson*, *Flook*, and *Diehr*.⁶³

3. The Supreme Court introduced the two-part eligibility test in *Mayo Collaborative Services v. Prometheus Laboratories*.

The lack of new guidance on how to determine eligibility in *Bilski* allowed the debate about the breadth of subject matter eligibility to continue.⁶⁴ As a result, district courts and the Federal Circuit struggled to consistently apply the principles outlined in *Benson*, *Flook*, and *Diehr*.⁶⁵ The uncertainty about the standard for subject matter eligibility lead the

58. *Bilski*, 561 U.S. at 599 (“Petitioners’ application seeks patent protection for a claimed invention that explains how buyers and sellers of commodities in the energy market can protect, or hedge, against the risk of price changes.”).

59. *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (stating that under the machine-or-transformation test “[a] claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.”).

60. *Bilski*, 561 U.S. at 604 (“This Court’s precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible ‘process.’”).

61. *Id.* at 609 (“[T]he Patent Act leaves open the possibility that there are at least some processes that can be fairly described as business methods that are within patentable subject matter under § 101.”).

62. *Id.* at 612 (“The patent application here can be rejected under our precedents on the unpatentability of abstract ideas.”).

63. *Id.* (“The Court, therefore, need not define further what constitutes a patentable ‘process,’ beyond pointing to the definition of that term provided in § 100(b) and looking to the guideposts in *Benson*, *Flook*, and *Diehr*.”).

64. Gleason, *supra* note 21, at 782 (“The *Bilski* Court’s rejection of a bright line rule and its heavy reliance on cases from the 1970s and 1980s revitalized the § 101 debate.”).

65. *Id.* at 782–83 (“With no ascertainable framework, scattered opinions from different jurisdictions continued to challenge the Federal Circuit’s understanding of the overall purpose of § 101.”).

Supreme Court to develop a two-part test for determining eligibility in *Mayo Collaborative Services v. Prometheus Laboratories*.⁶⁶

Prometheus held patents on a method for increasing the efficacy of thiopurine drugs.⁶⁷ When a patient ingests a thiopurine drug, the patient metabolizes the drug, and certain metabolites become present in the patient's bloodstream.⁶⁸ The claimed method comprised steps of administering a thiopurine drug, measuring the level of metabolites in the patient's blood, and adjusting the dosage based on the level of metabolites in the patient's blood.⁶⁹

Prometheus sold diagnostic tests based on the claimed method to Mayo who used the tests.⁷⁰ Eventually, Mayo developed a test of their own using a different metabolite range.⁷¹ *Prometheus* then sued Mayo for patent infringement.⁷² The district court decided that the claims were directed to ineligible subject matter on a motion for summary judgement.⁷³ The Federal Circuit reversed, reasoning that the claim satisfied the machine-or-transformation test because the method results in the transformation of the body or blood taken from the body.⁷⁴

The Supreme Court again rejected the machine-or-transformation test as the sole test for patent eligibility.⁷⁵ The Court's analysis began by determining that the claims were directed to a law of nature—the relationship between dosage and metabolite levels.⁷⁶ The Court then examined the claims to determine if they contained more than the law of

66. See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 556 U.S. 66, 75–76 (2012) (describing the procedural history of the case in which the Federal Circuit struggled with how to apply the machine-or-transformation test after *Bilski*).

67. *Id.* at 73 (“The patents before us concern the use of thiopurine drugs in the treatment of autoimmune diseases, such as Crohn’s disease . . .”).

68. *Id.* (“When a patient ingests a thiopurine compound, his body metabolizes the drug, causing metabolites to form in his bloodstream.”).

69. *Id.* at 74–75.

70. *Id.* at 75 (“[*Prometheus*] sells diagnostic tests that embody the processes the patents describe. For some time petitioners, Mayo Clinic Rochester and Mayo Collaborative Services (collectively Mayo), bought and used those tests.”).

71. *Id.* (“Mayo announced that it intended to begin using and selling its own test—a test using somewhat higher metabolite levels to determine toxicity . . .”).

72. *Id.* at 75 (“*Prometheus* then brought this action claiming patent infringement.”).

73. *Id.* at 76 (“[T]he District Court ultimately granted summary judgment in Mayo’s favor. The court reasoned that the patents effectively claim natural laws . . .”).

74. *Id.* (“On appeal, the Federal Circuit reversed. . . . [T]he patents satisfied the Circuit’s ‘machine or transformation test,’ . . . bringing the claims into compliance with § 101.”).

75. *Id.* (“We . . . clarified that the ‘machine or transformation test’ is not a definitive test of patent eligibility, but only an important and useful clue.”).

76. *Id.* at 77 (“*Prometheus*’ patents set forth laws of nature—namely, relationships between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will prove ineffective or cause harm.”).

nature to make the claims patent eligible.⁷⁷ The Court examined *Diehr*, *Flook*, *Bilski*, and *Benson* to show how each affected the subject matter eligibility analysis.⁷⁸ Ultimately, the additional limitations of administering the drug and determining the metabolite levels did not transform the claim into a patent eligible application.⁷⁹

Throughout the *Mayo* opinion, the Court raised policy concerns that must be balanced when determining patent subject matter eligibility. One issue is how to determine the scope of the judicial exceptions. If the scope is too narrow, then inventors may monopolize some fundamental building blocks of technology and harm innovation.⁸⁰ However, all inventions rely on laws of nature, abstract ideas, or natural phenomena to some degree.⁸¹ If the judicial exceptions are construed to an overly broad extent, then no invention would be patentable, resulting in the evisceration of the patent system.⁸²

The Court also addressed the place of subject matter eligibility in the overall scheme of patentability. The eligibility analysis of *Mayo* does overlap with the novelty inquiry under § 102 when evaluating whether additional steps are well-known, routine, or conventional.⁸³ Since these analyses overlap, courts must balance these analyses to ensure that each is performing the function it was designed to perform: the § 101 analysis determining eligibility and the § 102 analysis determining novelty.⁸⁴

4. The Supreme Court established *Mayo*'s two-step test as the test for subject matter eligibility in *Alice Corp. v. CLS Bank International*.

Even after the *Mayo* decision demonstrated the two-step analysis to determine patent eligibility, confusion remained about the meaning of

77. *Id.* (“The question before us is whether the claims do significantly more than simply describe these natural relations.”).

78. *See id.* at 80–87 (summarizing the decisions in *Diehr*, *Flook*, *Bilski*, and *Benson* and applying their teachings to the present facts).

79. *Id.* at 80 (“For these reasons we believe that the steps are not sufficient to transform unpatentable natural correlations into patentable applications of those regularities.”).

80. *Id.* at 71 (“[M]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it.”).

81. *Id.* (“For all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.”).

82. *Id.* (“[T]oo broad an interpretation of this exclusionary principle could eviscerate patent law.”).

83. *Id.* at 90 (“We recognize that, in evaluating the significance of additional steps, the § 101 patent-eligibility inquiry and, say, the § 102 novelty inquiry might sometimes overlap.”).

84. *See id.* (describing the differences between the subject matter eligibility analysis and the novelty and obviousness analyses including how these analyses treat laws of nature differently).

inventive concept and how to apply the two-part test. The *Alice* decision provided a clear definition of the test and another example of the test's application for lower courts to follow.

Alice Corp. held patents directed to mitigating settlement risk.⁸⁵ The claimed method called for a third party to use a shadow record of debits and credits to an account to ensure that sufficient funds are available for transactions.⁸⁶ The shadow accounts would be reconciled with the actual accounts at the end of the day.⁸⁷ The patents contained method claims, claims to a computer configured to perform the method, and claims to a computer readable medium containing code to perform the method.⁸⁸

CLS Bank sought a declaratory judgement that *Alice Corp.*'s claims were invalid and not infringed.⁸⁹ CLS Bank and *Alice Corp.* both filed motions for summary judgement on whether the claims were subject matter eligible, and the district court found the claims ineligible.⁹⁰ A Federal Circuit panel reversed the district court's decision, finding that the claims were not directed to an abstract idea.⁹¹ The Federal Circuit reheard the case en banc and affirmed the district court's decision.⁹² Several concurring and dissenting opinions to the en banc decision paved the way for *Alice* to go to the Supreme Court.⁹³

85. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 213 (2014) ("The claims at issue relate to a computerized scheme for mitigating 'settlement risk' . . .").

86. *Id.* ("[An] intermediary creates 'shadow' credit and debit records (i.e., account ledgers) that mirror the balances in the parties' real-world accounts at 'exchange institutions' (e.g., banks). The intermediary updates the shadow records in real time as transactions are entered, allowing 'only those transactions for which the parties' updated shadow records indicate sufficient resources to satisfy their mutual obligations.'").

87. *Id.* at 214 ("At the end of the day, the intermediary instructs the relevant financial institutions to carry out the 'permitted' transactions in accordance with the updated shadow records . . .").

88. *Id.* ("[T]he patents in suit claim (1) the foregoing method for exchanging obligations (the method claims), (2) a computer system configured to carry out the method for exchanging obligations (the system claims), and (3) a computer-readable medium containing program code for performing the method of exchanging obligations (the media claims). All of the claims are implemented using a computer . . .").

89. *Id.* ("CLS Bank filed suit against petitioner, seeking a declaratory judgment that the claims at issue are invalid, unenforceable, or not infringed.").

90. *Id.* ("[T]he parties filed cross-motions for summary judgment on whether the asserted claims are eligible for patent protection under 35 U.S.C. § 101. The District Court held that all of the claims are patent ineligible . . .").

91. *Id.* ("A divided panel of the United States Court of Appeals for the Federal Circuit reversed, holding that it was not 'manifestly evident' that petitioner's claims are directed to an abstract idea.").

92. *Id.* ("The Federal Circuit granted rehearing en banc, vacated the panel opinion, and affirmed the judgment of the District Court . . .").

93. *Id.* at 215 (stating that Judge Lourie wrote a concurring opinion joined by four other judges and Judge Rader concurred-in-part and dissented-in-part joined by Judge Moore).

The Supreme Court used *Alice* to concisely state the two-part test for patent subject matter eligibility. The first step of the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.”⁹⁴ In *Alice*, the issue was whether the claims were directed to an abstract idea.⁹⁵ The Court did not define the term abstract idea. Instead, the Court compared the claims to abstract claims from previous cases including *Benson*, *Flook*, and *Bilski*.⁹⁶ Ultimately, the claims were directed to the abstract idea of intermediated settlement.⁹⁷

The second step of the two-part test is to “examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.”⁹⁸ This transformation must be more than an instruction to apply the abstract idea or implement the abstract idea on a general-purpose computer.⁹⁹ If a claim could become eligible by reciting the use of a computer, then the judicial exceptions would be extremely narrow and ineffective.¹⁰⁰ The Court progressed through its analysis by examining *Mayo*, *Benson*, *Flook*, and *Diehr*.¹⁰¹ The claims at issue in *Alice* did not add to the abstract idea in a way that made the claims eligible for patenting.¹⁰²

The *Alice* decision echoed the policy concerns articulated in *Mayo*. The Court was concerned with promoting innovation.¹⁰³ To further that goal, the scope of the judicial exceptions must be calibrated to an

94. *Id.* at 217.

95. *See id.* (examining the whether the claims are directed to an abstract idea under the first step of the two-part test).

96. *Id.* at 217–20 (referencing *Benson*, *Flook*, and *Bilski* and using the principles articulated in those decisions to analyze the present facts).

97. *Id.* at 221 (“[T]he claims at issue are directed to the abstract idea of intermediated settlement . . .”).

98. *Id.*

99. *Id.* at 222–23 (explaining that after *Flook* and *Diehr* that implementing an abstract idea on a general-purpose computer does not result in a patent eligible claim).

100. *Id.* at 224 (“[I]f that were the end of the § 101 inquiry, an applicant could claim any principle of the physical or social sciences by reciting a computer system configured to implement the relevant concept.”).

101. *Id.* at 221–24.

102. *Id.* at 225–26 (“Instead, the claims at issue amount to ‘nothing significantly more’ than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer. Under our precedents, that is not ‘enough’ to transform an abstract idea into a patent-eligible invention.”) (citation omitted).

103. *Id.* at 216 (“We have ‘repeatedly emphasized this . . . concern that patent law not inhibit further discovery by improperly tying up the future use of’ these building blocks of human ingenuity.”).

appropriate breadth.¹⁰⁴ If the exceptions are interpreted too narrowly, then fundamental building blocks of technology may be preempted.¹⁰⁵ However, if the exceptions are construed too broadly, then too few claims will be patent eligible, removing an incentive for inventors to participate in the patent system.¹⁰⁶

The Supreme Court has not given further guidance on the issue of patent subject matter eligibility and has denied petitions for certiorari on the issue.¹⁰⁷ Instead, the Supreme Court left the Federal Circuit to further develop patent subject matter eligibility law within the framework of the *Alice* test.

III. THE FEDERAL CIRCUIT'S TREATMENT OF SUBJECT MATTER ELIGIBILITY DURING RULE (12)(B)(6) AND (12)(C) MOTIONS

A. *The Changing Treatment of Rule (12)(b)(6) and 12(c) Motions at the Federal Circuit During the Mayo and Alice Decisions*

Subject matter eligibility was decided at the motion for summary judgement stage in *Mayo*, *Myriad*, and *Alice*.¹⁰⁸ None of the recent Supreme Court decisions on subject matter eligibility were decided at the pleading stage of litigation or gave specific guidance on deciding subject matter eligibility at that stage. This is likely because subject matter eligibility was rarely decided on the pleadings before *Alice*.¹⁰⁹

Despite the rarity of subject matter eligibility decisions at the Rule 12 stage before *Alice*, the Federal Circuit did hear subject matter eligibility issues decided on the pleadings while the Supreme Court was developing the *Alice* test. The Federal Circuit's analysis of subject matter eligibility in *Ultramercial, LLC v. Hulu, LLC* displays how *Mayo* and *Alice* affected subject matter eligibility analysis at the Rule 12 stage.

104. *See id.* at 216–17 (explaining that there are negative consequences for interpreting the judicial exceptions too broadly or too narrowly).

105. *Id.* at 216 (“We have ‘repeatedly emphasized this . . . concern that patent law not inhibit further discovery by improperly tying up the future use of’ these building blocks of human ingenuity.”).

106. *Id.* at 217 (“At some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’”).

107. *See, e.g.,* *Two-Way Media, Ltd. v. Comcast Cable Commc’ns, LLC*, 139 S. Ct. 378 (2018) (mem.); *Sequenom, Inc. v. Ariosa Diagnostics, Inc.*, 136 S. Ct. 2511 (2016) (mem.).

108. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 214 (2014); *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 586 (2013); *Mayo Collaborative Servs. V. Prometheus Labs., Inc.*, 566 U.S. 66, 76 (2012).

109. O’Byrne, *supra* note 13, at 408 (noting that the Federal Circuit stated that Rule 12(b)(6) dismissal for ineligibility would not be proper in most cases).

1. The first *Ultramercial* decision exemplifies the Federal Circuit’s treatment of motions to dismiss for lack of eligibility before the *Mayo* and *Alice* decisions.

Ultramercial held a patent with claims directed to providing users with copyrighted content in exchange for viewing an advertisement.¹¹⁰ The advertiser would pay for the content so a viewer could access the content in exchange for viewing an advertisement.¹¹¹ *Ultramercial* brought an infringement suit against Hulu, YouTube, and WildTangent.¹¹² Hulu and YouTube were dismissed from the case, and WildTangent filed a Rule 12(b)(6) motion alleging that the patent was invalid under § 101.¹¹³ The district court granted WildTangent’s motion and *Ultramercial* appealed.¹¹⁴

The Federal Circuit issued its first decision in this case in 2011—after *Bilski* but before *Mayo*. The Federal Circuit viewed § 101 as a coarse filter that is broadly permissive, while still subject to the judicial exceptions.¹¹⁵ The court relied on *Diehr*, *Flook*, and *Benson* when analyzing whether the claims were related to an abstract idea.¹¹⁶ The court also recognized that *Bilski* rejected the machine-or-transformation test as the sole test for eligibility.¹¹⁷

The Federal Circuit gave guidance specific to analyzing subject matter eligibility early in litigation.¹¹⁸ In its analysis, the court noted that claim construction had not been performed and that claim construction

110. *Ultramercial, LLC v. Hulu, LLC*, 657 F.3d 1323, 1324 (Fed. Cir. 2011) (“The ‘545 patent claims a method for distributing copyrighted products (e.g., songs, movies, books) over the Internet where the consumer receives a copyrighted product for free in exchange for viewing an advertisement, and the advertiser pays for the copyrighted content.”).

111. *Id.*

112. *Id.* at 1325 (“*Ultramercial* filed suit against Hulu, LLC (‘Hulu’), YouTube, LLC (‘YouTube’), and WildTangent, Inc. (‘WildTangent’) . . .”).

113. *Id.* (“Hulu and YouTube have been dismissed from the case. WildTangent filed a motion to dismiss for failure to state a claim, arguing that the ‘545 patent did not claim patent-eligible subject matter.”).

114. *Id.* (“The district court granted Wild-Tangent’s motion to dismiss. *Ultramercial* appeals.”).

115. *Id.* (“[E]ligibility is a ‘coarse’ gauge of the suitability of broad subject matter categories for patent protection . . .”).

116. *Id.* at 1327–29.

117. *Id.* at 1327 (“[T]he machine-or-transformation test is simply ‘a useful and important clue . . . for determining whether some claimed inventions are processes under § 101’ and is not ‘the sole test for deciding whether an invention is a patent-eligible ‘process.’”).

118. *See id.* at 1325.

can assist the court in determining abstractness.¹¹⁹ However, the court decided that formal claim construction was not necessary in this case.¹²⁰

The court found the claims eligible because they were directed to a practical application of the idea of using an advertisement as currency.¹²¹ WildTangent petitioned for certiorari.¹²² The Supreme Court vacated the Federal Circuit's decision and remanded the case for reconsideration in light of *Mayo*.¹²³

2. The second *Ultramercial* decision outlined several policy reasons for refraining from eligibility determinations on the pleadings.

The Federal Circuit began its second decision in *Ultramercial* with detailed guidance on deciding eligibility at the motion to dismiss stage.¹²⁴ The court emphasized that dismissal for ineligible subject matter would be rare and gave three lines of reasoning in support.¹²⁵ First, patents are presumed to be valid, and invalidity must be shown by clear and convincing evidence.¹²⁶ To succeed on an ineligibility defense on the pleadings, the defendant must show that the only plausible reading of the patent and complaint results in ineligibility when construed in the light most favorable to the plaintiff.¹²⁷

Second, while the § 101 analysis is a question of law, the determination of eligibility often contains underlying factual issues.¹²⁸

119. *Id.* (“The district court dismissed Ultramercial’s claims for failure to claim statutory subject matter without formally construing the claims. . . . On many occasions, however, a definition of the invention via claim construction can clarify the basic character of the subject matter of the invention.”).

120. *Id.* (“In this case, the subject matter at stake and its eligibility does not require claim construction.”).

121. *Id.* at 1330 (“In sum, as a practical application of the general concept of advertising as currency and an improvement to prior art technology, the claimed invention is not ‘so manifestly abstract as to override the statutory language of section 101.’”).

122. *WildTangent, Inc. v. Ultramercial, LLC*, 566 U.S. 1007 (2012) (mem.).

123. *Id.*

124. *See Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1338–39 (Fed. Cir. 2013) (examining considerations the court should keep in mind when examining subject matter eligibility at the pleading stage of litigation).

125. *Id.* at 1338 (“[I]t will be rare that a patent infringement suit can be dismissed at the pleading stage for lack of patentable subject matter.”).

126. *Id.* (“This is so because every issued patent is presumed to have been issued properly, absent clear and convincing evidence to the contrary.”).

127. *Id.* at 1339 (“Thus, the *only* plausible reading of the patent must be that there is clear and convincing evidence of ineligibility.”).

128. *Id.* (“[T]he analysis under § 101, while ultimately a legal determination, is rife with underlying factual issues.”).

Factual issues could include whether the claims are directed to a law of nature or an abstract idea; whether a claim element was routine or conventional; and to what extent the claim preempts the use of an abstract idea or law of nature.¹²⁹

Third, claim construction is often helpful when determining whether the claims are directed to a judicial exception.¹³⁰ There is no bright line rule requiring claim construction before an eligibility analysis.¹³¹ However, claims should be construed if there are factual disputes.¹³² If claims are not construed, then the court should read the claims in the light most favorable to the plaintiff at the motion to dismiss stage.¹³³

After this discussion, the Federal Circuit continued with a detailed analysis of the current state of subject matter eligibility law and an analysis of whether the claim was directed to an abstract idea.¹³⁴ The court found that Ultramercial's claim was directed to a particular process, did not preempt all forms of advertising, and was not overgeneralized.¹³⁵ Therefore, the claimed invention was not directed to an abstract idea but to a practical application.¹³⁶

WildTangent petitioned for certiorari again.¹³⁷ While that petition was pending, the Supreme Court decided *Alice*. The Supreme court vacated the Federal Circuit's decision and remanded the case for further consideration in light of *Alice*.¹³⁸

129. *Id.*

130. *Id.* at 1340 (“[C]laim meaning may clarify the actual subject matter at stake in the invention and can enlighten, or even answer, questions about subject matter abstractness.”).

131. *Id.* at 1339 (“This court has never set forth a bright line rule requiring district courts to construe claims before determining subject matter eligibility.”).

132. *Id.* (“On the other hand, if there are factual disputes, claim construction should be required.”).

133. *Id.* (“It may also be feasible for the district court to choose to . . . adopt the [claim] construction proffered by the patentee.”).

134. *Id.* at 1340–48 (examining *Mayo* and the previous eligibility decisions to determine whether WildTangent's claims are eligible).

135. *Id.* at 1352–53.

136. *Id.* at 1354 (“In sum, as a practical application of the general concept of advertising as currency and an improvement to prior art technology, the claimed invention is not ‘so manifestly abstract as to override the statutory language of section 101.’”).

137. *WildTangent, Inc. v. Ultramercial, LLC*, 573 U.S. 942 (2014) (mem.).

138. *Id.*

3. The third *Ultramercial* decision shows how the *Alice* test changed the Federal Circuit's treatment of dismissals for lack of eligibility on the pleadings.

The Federal Circuit's third decision in the *Ultramercial* litigation set the stage for its current treatment of subject matter eligibility at the motion to dismiss stage. This decision omitted all the discussion warning against deciding eligibility at the motion to dismiss stage of the previous opinion.¹³⁹ Instead, the court succinctly went through the *Alice* test.¹⁴⁰ Under step one, the claim was directed to an abstract idea of showing an advertisement before free content.¹⁴¹ Under step two, there was no inventive concept to transform the claim into an eligible application because the claims did not contain an inventive concept beyond what was well-known, routine, or conventional in the art.¹⁴² Therefore, the claim was ineligible.¹⁴³

After the Supreme Court's decision in *Alice* and the Federal Circuit's decision in *Ultramercial*, the Federal Circuit consistently affirmed district courts' decisions of ineligibility on the pleadings.¹⁴⁴ The Federal Circuit decisions exhibit an almost formulaic structure. The decisions begin with a summary of the technology and the claim language in question. The court then outlines the *Alice* test and the standard of review. The court performs the *Alice* test and usually ends the opinion by addressing the arguments of the losing side.

Within this structure, the policy reasons for not deciding subject matter eligibility at the motion to dismiss stage outlined in the Federal

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

140. See *id.* at 714 (“In *Alice*, the Supreme Court identified a ‘framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.’”).

141. *Id.* at 715 (“[T]he concept embodied by the majority of the limitations describes only the abstract idea of showing an advertisement before delivering free content.”).

142. *Id.* at 716 (“In sum, each of those eleven steps merely instructs the practitioner to implement the abstract idea with ‘routine, conventional activit[ies],’ which is insufficient to transform the patent-ineligible abstract idea into patent-eligible subject matter.”) (alteration in original).

143. *Id.* at 717 (“Because the ‘545 patent claims are directed to no more than a patent-ineligible abstract idea, we conclude that the district court did not err in holding that the ‘545 patent does not claim patent-eligible subject matter.”).

144. *E.g.*, *Voter Verified, Inc. v. Election Sys. & Software, LLC*, 887 F.3d 1376, 1379 (Fed. Cir. 2018); *Secured Mail Sols., LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 907 (Fed. Cir. 2017); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1091 (Fed. Cir. 2016); *Vehicle Intelligence & Safety, LLC v. Mercedes-Benz USA, LLC*, 635 Fed. Appx. 914, 915 (Fed. Cir. 2015) (per curiam); *Content Extraction & Transmission, LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1343 (Fed. Cir. 2014); *Ultramercial*, 772 F.3d at 710; *Addy*, *supra* note 12 (noting that most district court decisions of ineligibility are on the pleadings and that most appeals of dismissals for lack of eligibility are affirmed by the Federal Circuit).

Circuit's second *Ultramercial* decision carry little weight. The second *Ultramercial* decision recognized that factual issues may prevent a determination of eligibility at the pleading stage. However, in *Vehicle Intelligence & Safety, LLC v. Mercedes-Benz USA, LLC*, the Federal Circuit characterized the issue of subject matter eligibility as a question of law without referencing the presence of underlying factual questions.¹⁴⁵ This trend continued until the decisions in *Berkheimer v. HP Inc.*¹⁴⁶ and *Aatrix Software, Inc. v. Green Shades Software, Inc.*,¹⁴⁷ in which the Federal Circuit clarified that the subject matter eligibility analysis does contain underlying factual issues.

Ultramercial also noted that claim construction may aid in the eligibility determination but did not require claim construction before determining eligibility. Since then, the Federal Circuit has consistently affirmed dismissal in cases without claim construction. In *FairWarning IP, LLC v. Iatric Systems*, FairWarning argued that a specific claim construction would root the invention in computer technology and render the claims eligible.¹⁴⁸ The Federal Circuit dismissed the argument, reasoning that, regardless of claim construction, the invention was merely computer implementation of an abstract idea, which is patent ineligible.¹⁴⁹ When claim construction has occurred, the Federal Circuit uses that construction and often praises its helpfulness.¹⁵⁰ Even though the Federal Circuit stated that claim construction can aid the eligibility analysis, the Federal Circuit has not specifically required claim construction before determining eligibility at the Rule 12 stage.

145. *Mercedes-Benz*, 635 Fed. Appx. at 917 (“Because patent eligibility under 35 U.S.C. § 101 is an issue of law, we review it de novo.”).

146. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) (“Patent eligibility under 35 U.S.C. § 101 is ultimately an issue of law we review de novo. The patent eligibility inquiry may contain underlying issues of fact.”).

147. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018) (“While the ultimate determination of eligibility under § 101 is a question of law, like many legal questions, there can be subsidiary fact questions which must be resolved en route to the ultimate legal determination.”).

148. *FairWarning*, 839 F.3d at 1098 (describing FairWarning’s proposed construction and stating that “[t]he implication of this construction, FairWarning argues, would be that ‘the ‘500 patent is necessarily rooted in computer technology.’”).

149. *See id.* (“Simply requiring computer implementation of an otherwise abstract-idea process, as FairWarning would require of the claim, does not make the claims patent eligible. Regardless of the resolution of this construction issue, the ‘500 patent claims patent-ineligible subject matter.”).

150. *See McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1311 (Fed. Cir. 2016) (“As an initial matter, we note that, in this case, claim construction is helpful to resolve the question of patentability under § 101.”).

B. *The Federal Circuit's Treatment of Rule 12(b)(6) and 12(c) Motions for Subject Matter Ineligibility After Alice*

1. The Federal Circuit reversed a dismissal for lack of eligibility and discussed the place of eligibility determinations in litigation.

The Federal Circuit has reversed a district court's decision of ineligibility on a Rule 12(b)(6) or Rule 12(c) motion only eight times since the Supreme Court's *Alice* decision.¹⁵¹ The first time was in *BASCOM Global Internet Servs. v. AT&T Mobility, LLC*. The claims in *BASCOM* were directed to filtering internet content.¹⁵² Prior internet filters either resided on the internet service provider's (ISP) server or resided on the computers of individual users.¹⁵³ Filters on ISP servers apply one set of filtering rules to all users while filters on local systems are individually customizable but susceptible to circumvention by experienced users.¹⁵⁴ *BASCOM*'s system combined the benefits of both prior systems in a filter residing on an ISP's server that was customizable for individual users.¹⁵⁵

BASCOM sued AT&T for infringement.¹⁵⁶ AT&T responded with a Rule 12(b)(6) motion arguing that the claims were invalid under 35 U.S.C. § 101.¹⁵⁷ The district court granted AT&T's motion to dismiss, and *BASCOM* appealed.¹⁵⁸

151. See *Endo Pharm., Inc. v. Teva Pharm. USA, Inc.*, 919 F.3d 1347, 1347 (Fed. Cir. 2019); *Nat. Alts. Int'l, Inc. v. Creative Compounds, LLC*, 918 F.3d 1338, 1339 (Fed. Cir. 2019); *Data Engine Techs., LLC v. Google, LLC*, 906 F.3d 999, 1000 (Fed. Cir. 2018); *Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1343 (Fed. Cir. 2018); *Aatrix*, 882 F.3d at 1122; *Visual Memory, LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1253 (Fed. Cir. 2017); *McRO*, 837 F.3d at 1300; *BASCOM Glob. Internet Servs. V. AT&T Mobility, LLC*, 827 F.3d 1341, 1342 (Fed. Cir. 2016).

152. See *BASCOM*, 827 F.3d at 1343–44 (describing the prior art filter systems and the patented system).

153. *Id.* (explaining that “filtering software was first placed on local computers” and “some Internet Service Providers (ISPs), such as ‘America Online,’ installed a filter on their remote servers . . .”).

154. *Id.*

155. *Id.* at 1344 (“The ‘606 patent describes its invention as combining the advantages of the then-known filtering tools while avoiding their drawbacks.”).

156. *Id.* at 1346 (“*BASCOM* sued AT&T Inc. for patent infringement, added AT&T Mobility LLC and AT&T Corp. (collectively, AT&T) as defendants, and then dismissed AT&T Inc. from the case.”).

157. *Id.* (“AT&T moved to dismiss *BASCOM*'s complaint under FRCP 12(b)(6), on the basis that each claim of the ‘606 patent was invalid under 35 U.S.C. § 101.”).

158. *Id.* at 1346–47 (“The district court found that the claims were directed to [an] abstract idea . . . The district court then determined that the limitations in combination were not inventive. . . . *BASCOM* appeals.”).

The Federal Circuit applied the *Alice* test.¹⁵⁹ Under the first step, they agreed with the district court that the claims were directed to the abstract idea of filtering content.¹⁶⁰ However, the Federal Circuit disagreed with the district court's analysis at step two of the *Alice* test.¹⁶¹ The district court's analysis mirrored an obviousness analysis too closely, looking for each element of the claim in the prior art.¹⁶² The Federal Circuit stressed that an inventive concept under *Alice* step two can arise from a non-conventional arrangement of previously known pieces.¹⁶³ The claims recited a specific implementation of the abstract idea of filtering content in a way that would not preclude all methods of filtering content on the internet.¹⁶⁴

With regard to determining eligibility at the pleading stage, the court recognized that the claims must be construed in BASCOM's favor during this stage of litigation.¹⁶⁵ BASCOM alleged the presence of an inventive concept that would make the claims eligible, and the court found no evidence on the record that would refute that allegation as a matter of law.¹⁶⁶ Therefore, the court reversed the district court's dismissal and remanded the case.¹⁶⁷

Judge Newman concurred with the decision but questioned the distinction between eligibility and patentability determinations.¹⁶⁸ She

159. *Id.* at 1347 (“[T]he Supreme Court set forth a two-step analytical framework to identify patents that, in essence, claim nothing more than abstract ideas.”).

160. *Id.* at 1348 (“The claims of the ‘606 patent are directed to filtering content on the Internet. . . . We agree with the district court that filtering content is an abstract idea . . .”).

161. *Id.* at 1349 (“However, we disagree with the district court’s analysis of the ordered combination of limitations.”).

162. *Id.* at 1350 (“The district court’s analysis . . . looks similar to an obviousness analysis under 35 U.S.C. § 103, except lacking an explanation of a reason to combine the limitations as claimed. The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art.”).

163. *Id.* (“[A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.”).

164. *Id.* (“The claims do not merely recite the abstract idea of filtering content along with the requirement to perform it on the Internet, or to perform it on a set of generic computer components. . . . Nor do the claims preempt all ways of filtering content on the Internet. . . .”).

165. *Id.* at 1352 (“[C]onstrued in favor of BASCOM as they must be in this procedural posture, the claims of the ‘606 patent do not preempt the use of the abstract idea of filtering content on the Internet . . .”).

166. *Id.* (“BASCOM has alleged that an inventive concept can be found in the ordered combination of claim limitations that transform the abstract idea of filtering content into a particular, practical application of that abstract idea. We find nothing on this record that refutes those allegations as a matter of law or justifies dismissal under Rule 12(b)(6).”).

167. *Id.* (“We therefore vacate the district court’s order granting AT&T’s motion to dismiss under FRCP 12(b)(6) and remand so that the case may proceed.”).

168. *Id.* at 1352–55 (Newman, J., concurring) (writing separately to question deciding eligibility followed by patentability).

noted that, when eligibility issues arise, the courts usually first decide eligibility then decide patentability.¹⁶⁹ Separate eligibility and patentability determinations are cumbersome, use additional judicial resources, and do not take advantage of the overlap in analysis between eligibility and patentability.¹⁷⁰ Also, if the court decides a claim is unpatentable, then the eligibility issue is moot.¹⁷¹ Given the overlap between the eligibility analysis and various patentability analyses, Judge Newman proposed determining patentability in response to an allegation that a claim is directed toward an abstract idea.¹⁷²

2. The Federal Circuit reversed two decisions of ineligibility without additional guidance on making eligibility determinations on the pleadings.

The Federal Circuit also reversed a district court finding of ineligibility in *McRO, Inc. v. Bandai Namco Games Am. Inc.*¹⁷³ The claims in *McRO* were directed toward a method for efficient lip synchronization and manipulation of character facial expressions in computer animated characters.¹⁷⁴ McRO filed an infringement suit against several video game developers and publishers.¹⁷⁵ The Central District of California consolidated several of the cases and proceeded with claim construction.¹⁷⁶ Then, the defendants moved for judgement on the

169. *Id.* at 1353 (Newman, J., concurring).

170. *Id.* at 1352 (Newman, J., concurring) (“[T]hese cumbersome procedures for separate determinations of patent eligibility and patentability have added to the cost and uncertainty of patent-supported commerce, with no balancing benefit.”).

171. *Id.* at 1355 (Newman, J., concurring) (“If the claims are unpatentable, any issue of abstractness, however defined, is mooted.”).

172. *Id.* at 1353 (Newman, J., concurring) (“I propose returning to the letter of Section 101, where eligibility is recognized for ‘any new and useful process, machine, manufacture, or composition of matter.’ It follows that if any of these classes is claimed so broadly or vaguely or improperly as to be deemed an ‘abstract idea,’ this could be resolved on application of the requirements and conditions of patentability.”).

173. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1303 (Fed. Cir. 2016).

174. *Id.* at 1307 (“[I]t is the primary object of this invention to provide a method for automatically . . . producing accurate and realistic lip synchronization and facial expressions in animated characters.”).

175. *Id.* at 1308 (“McRO, Inc., d/b/a Planet Blue (‘McRO’) filed lawsuits in the U.S. District Courts for the Central District of California and for the District of Delaware. The defendants are generally video game developers and publishers.”).

176. *Id.* (“The Central District of California (‘district court’) consolidated the proceedings there for pre-trial purposes on two tracks. It held a claim construction hearing the Track 1 cases . . .”).

pleadings under Rule 12(c).¹⁷⁷ The district court found the claims ineligible, and McRO appealed.¹⁷⁸

The Federal Circuit proceeded through the *Alice* test and disagreed with the district court at step one.¹⁷⁹ McRO argued that, under *Diehr*, the claims were not directed toward an abstract idea, and the defendants argued that the claims were ineligible under *Flook*, because they were directed to unpatentable algorithms.¹⁸⁰ The Federal Circuit decided that the claims were directed to a subset of methods for animating characters and that the claimed method would not preempt every process in that category.¹⁸¹ The method was also distinct from the method used by human animators to achieve lip-synchronization.¹⁸² The claimed process improved existing animation technology; therefore, it was not directed to an abstract idea.¹⁸³ Since the claim was not directed to an abstract idea, the court did not examine *Alice* step two.¹⁸⁴ While *McRO* is one of the few cases in which the Federal Circuit reversed a district court's decision of ineligibility on the pleadings, the Federal Circuit did not give additional guidance on deciding eligibility on the pleadings.

Visual Memory, LLC v. NVIDIA Corp. was the third case in which the Federal Circuit found claims dismissed on the pleadings to be patent eligible.¹⁸⁵ In this case, the claim at issue was not directed to a method but to a computer memory system.¹⁸⁶ Visual Memory sued NVIDIA for infringement of the memory system, and NVIDIA moved to dismiss under Rule 12(b)(6).¹⁸⁷ The district court found the claim directed to the abstract

177. *Id.* (“On July 10, 2014, all Central District of California defendants . . . jointly filed a motion for judgment on the pleadings that the asserted claims were directed to patent ineligible subject matter under § 101.”).

178. *Id.* at 1309 (“The district court entered judgment against McRO . . . McRO appeals.”).

179. *Id.* at 1313 (disagreeing with the district court that the claims were directed to an abstract idea).

180. *Id.* at 1309–10.

181. *Id.* at 1313–15.

182. *Id.* at 1314 (explaining how a human animator would not follow the steps of the claimed algorithm).

183. *Id.* at 1316 (“[C]laim 1 is directed to a patentable, technological improvement over the existing, manual 3-D animation techniques.”).

184. *Id.* (“Because we find that claim 1 is not directed to ineligible subject matter, we do not reach *Alice* step two.”).

185. *Visual Memory, LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1255 (Fed. Cir. 2017).

186. *Id.* (“The ‘740 patent purports to overcome these deficiencies by creating a memory system with programmable operational characteristics that can be tailored for use with multiple different processors without the accompanying reduction in performance.”).

187. *Id.* at 1257 (“Visual Memory sued NVIDIA for infringement of the ‘740 patent. Believing the claims to be directed to patent-ineligible subject matter, NVIDIA filed a motion to dismiss for failure to state a claim pursuant to Federal Rule of Civil Procedure 12(b)(6).”).

idea of categorical data storage with no additional inventive concept and dismissed the case. *Visual Memory* appealed.¹⁸⁸

The Federal Circuit focused on the *Alice* test and again gave no specific guidance on deciding eligibility at the pleading stage. Under *Alice* step one, the court found that the claim was not directed to an abstract idea because it provided an improvement to the functioning of a computer.¹⁸⁹ Judge Hughes dissented and would have found the claim ineligible.¹⁹⁰ Under *Alice* step one, the claim was directed to the abstract idea of categorical data storage, and the claim did not contain an inventive concept under *Alice* step two when the claim referred only to generic computer components.¹⁹¹

C. *The Federal Circuit decided that factual allegations may prevent dismissal for lack of subject matter eligibility at the pleading stage.*

1. The Federal Circuit reversed a dismissal for lack of eligibility and allowed a party to amend its complaint to make additional factual allegations favoring eligibility.

The fourth case in which the Federal Circuit reversed a district court's dismissal for ineligibility on the pleadings is *Aatrix Software Inc. v. Green Shades Software, Inc.*¹⁹² *Aatrix* and its sister case *Berkheimer v. HP Inc.* are notable for recognizing that the subject matter eligibility analysis is a question of law with underlying questions of fact.¹⁹³ While this characterization was not new to subject matter eligibility law, it had

188. *Id.* (“The district court granted NVIDIA’s motion. . . . *Visual Memory* appeals the district court’s decision.”).

189. *Id.* at 1262 (explaining that using conventional components is not fatal to patent eligibility when improvements are made to the functioning of the computer).

190. *Id.* (Hughes, J., dissenting) (“I would find the ‘740 claims are directed to the abstract idea of categorical data storage. At step two of *Alice*, I would find the claims fail to recite any inventive concepts sufficient to transform themselves into a patent-eligible application. Thus, I believe the ‘740 claims are ineligible under § 101 . . .”).

191. *Id.* (Hughes, J., dissenting).

192. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1130 (Fed. Cir. 2018) (“[W]e vacate the district court’s dismissal under Rule 12(b)(6) and reverse its denial of *Aatrix*’s motion for leave to file a second amended complaint.”).

193. Meredith Addy, *Is there a Light at the End of the Alice Tunnel?*, IPWATCHDOG (Feb. 18, 2018), <https://www.ipwatchdog.com/2018/02/18/light-end-alice-tunnel/id=93883/> [<https://perma.cc/N83R-9YFB>] (stating that by recognizing factual components of the eligibility analysis, “*Aatrix*, and *Berkheimer* depart from the Court’s post-*Alice* precedent.”).

not appeared in a Federal Circuit decision since the Supreme Court's decision in *Alice*.¹⁹⁴

The claims in *Aatrix* were directed to a system for designing, creating, and importing data into a viewable form.¹⁹⁵ *Aatrix* sued Green Shades for infringement of two of its patents.¹⁹⁶ Green Shades filed a motion to dismiss under Rule 12(b)(6), arguing that all the claims were ineligible.¹⁹⁷ *Aatrix* argued against dismissal so that claim construction could proceed and moved to amend its complaint.¹⁹⁸ The district court granted Green Shades' motion to dismiss and did not allow *Aatrix* to amend its complaint.¹⁹⁹ *Aatrix* appealed to the Federal Circuit.²⁰⁰

The Federal Circuit began its analysis by affirming that "patent eligibility can be determined at the Rule 12(b)(6) stage" of litigation.²⁰¹ The Federal Circuit then discussed a limitation on that rule, stating that dismissal is only appropriate when there are no factual allegations that would prevent resolving an eligibility issue as a matter of law.²⁰² Subject matter eligibility is a question of law with underlying questions of fact, and the question of whether claim elements are routine or conventional is a question of fact.²⁰³ At the Rule 12(b)(6) stage, the allegations in the complaint, patent, and material subject to judicial notice must be viewed in a light favorable to the patentee.²⁰⁴ The Federal Circuit determined that the district court should have denied Green Shades' motion to dismiss and

194. See *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1363–64 (Fed. Cir. 2018) (en banc) (Reyna, J., dissenting) ("Perhaps the single most consistent factor in this court's § 101 law has been our precedent that the § 101 inquiry is a question of law.").

195. *Aatrix*, 882 F.3d at 1123 ("The '615 and the '393 patents . . . are directed to 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.").

196. *Id.* at 1124 ("Aatrix sued Green Shades Software, Inc. ('Green Shades') for infringement of the '615 and '393 patents.").

197. *Id.* ("Green Shades moved to dismiss the complaint under Rule 12(b)(6). It argued all claims in the asserted patents were ineligible under § 101.").

198. *Id.* ("Aatrix argued the motion should be denied 'to permit claim construction to go forward and for the [district court] to acquaint itself with the actual inventions.').")

199. *Id.* ("The district court granted Green Shades' motion and held every claim ineligible under § 101. . . . Aatrix moved to . . . amend the complaint. . . . The district court denied these motions. . . .").

200. *Id.* ("Aatrix timely appealed.').")

201. *Id.* at 1125 ("We have held that patent eligibility can be determined at the Rule 12(b)(6) stage.').")

202. *Id.* ("This is true only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.').")

203. *Id.* at 1128 ("Whether the claim elements or the claimed combination are well-understood, routine, conventional is a question of fact.').")

204. *Id.* ("And in this case, that question cannot be answered adversely to the patentee based on the sources properly considered on a motion to dismiss, such as the complaint, the patent, and materials subject to judicial notice.').")

allowed Aatrix to amend its complaint because the amended complaint raised factual issues that would have prevented the conclusion that the claim elements were well-understood, routine, or conventional under the second step of the *Alice* test.²⁰⁵ Therefore, the Federal Circuit vacated and remanded the district court's dismissal.²⁰⁶

Judge Reyna wrote an opinion concurring-in-part and dissenting-in-part.²⁰⁷ He agreed with the decision to vacate and remand the case.²⁰⁸ However, he disagreed with the emphasis that the majority placed on the underlying factual questions of subject matter eligibility.²⁰⁹ He noted that there is precedent for subject matter eligibility being a pure question of law.²¹⁰ He also argued that this decision may make it easier for plaintiffs to avoid motions to dismiss by amending their complaints to contain factual allegations that must be taken as true.²¹¹

2. The Federal Circuit decided not to rehear *Aatrix* en banc, sparking discussion about the state of subject matter eligibility jurisprudence.

Green Shades petitioned for a rehearing en banc, which the Federal Circuit denied.²¹² The denial came with two concurring opinions and one dissent. In his concurrence, Judge Moore recognized that every type of validity challenge is either entirely factual or contains underlying factual issues.²¹³ The Supreme Court recognized that the eligibility analysis

205. *Id.* at 1126 (“The proposed second amended complaint contains allegations that, taken as true, would directly affect the district court’s patent eligibility analysis. These allegations at a minimum raise factual disputes underlying the § 101 analysis, such as whether the claim term ‘data file’ constitutes an inventive concept, . . . sufficient to survive an *Alice/Mayo* analysis at the Rule 12(b)(6) stage.”).

206. *Id.* at 1130 (“For the foregoing reasons we vacate the district court’s dismissal under Rule 12(b)(6) and reverse its denial of Aatrix’s motion for leave to file a second amended complaint.”).

207. *Id.* (Reyna, J., concurring-in-part and dissenting-in-part).

208. *Id.* (Reyna, J., concurring-in-part and dissenting-in-part) (“I concur with the majority’s decision to vacate and remand to the district court on the motion to dismiss.”).

209. *Id.* (Reyna, J., concurring-in-part and dissenting-in-part) (“[T]he majority opinion attempts to shoehorn a significant factual component into the *Alice* § 101 analysis.”).

210. *Id.* (Reyna, J., concurring-in-part and dissenting-in-part) (“Our precedent is clear that the § 101 inquiry is a legal question.”).

211. *Id.* at 1130 (Reyna, J., concurring-in-part and dissenting-in-part) (“One effect of this approach is that a plaintiff facing a 12(b)(6) motion may simply amend its complaint to allege extrinsic facts that, once alleged, must be taken as true, regardless of its consistency with the intrinsic record.”).

212. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1355 (Fed. Cir. 2018) (en banc) (per curiam).

213. *Id.* at 1355–56 (Moore, J., concurring) (“Every other type of validity challenge is either entirely factual (e.g., anticipation, written description, utility), a question of law with underlying facts

would overlap with the novelty analysis—an analysis that is factual in nature—implying that the eligibility analysis involves factual determinations.²¹⁴ When factual questions arise, they must be treated appropriately according to the Federal Rules of Civil Procedure: on a motion to dismiss, the court must determine if the complaint states a claim for relief when viewed in a light most favorable to the plaintiff.²¹⁵

Judge Lourie wrote a separate concurrence questioning the current subject matter eligibility analysis.²¹⁶ He gave an overview of how subject matter eligibility became a complex, multi-step analysis and questioned why a two-step test is necessary to determine whether an idea is abstract.²¹⁷ He advocated for changes to subject matter eligibility law by congressional intervention and noted that an en banc decision in this case would not resolve the problems of the current subject matter eligibility analysis.²¹⁸

Judge Reyna again dissented. He disagreed with the emphasis placed on the factual portion of the eligibility analysis, arguing that eligibility is a question of law.²¹⁹ The subject matter eligibility analysis is focused on the claims.²²⁰ Claim construction is a question of law, so subject matter eligibility should also be primarily a question of law.²²¹ He advocated for determining eligibility based on the information within the four corners

(e.g., obviousness, enablement), or a question of law that may contain underlying facts (e.g., indefiniteness).”).

214. *Id.* at 1356 (Moore, J., concurring) (“Indeed, the Court recognized that ‘in evaluating the significance of additional steps, the § 101 patent-eligibility inquiry and, say, the § 102 novelty inquiry might sometimes overlap.’ [C]ase law from the Supreme Court and this court has stated for decades that anticipation is a factual question.”) (citation omitted).

215. *Id.* at 1357 (Moore, J., concurring) (“If patent eligibility is challenged in a motion to dismiss for failure to state a claim pursuant to Rule 12(b)(6), we must apply the well-settled Rule 12(b)(6) standard which is consistently applied in every area of law.”).

216. *Id.* at 1360 (Lourie, J., concurring) (stating that many in the innovation field consider the § 101 analysis to have problems).

217. *Id.* at 1360–61 (Lourie, J., concurring) (describing the broad statutory basis of eligibility and how the courts have narrowed it).

218. *Id.* at 1361–62 (Lourie, J., concurring) (“I concur in the decision of the court not to rehear this § 101 case en banc. . . . [I]t would not work us out of the current § 101 dilemma. . . . Resolution of patent-eligibility issues requires higher intervention . . .”).

219. *Id.* at 1362 (Reyna, J., dissenting) (“*Aatrix* and *Berkheimer* alter the § 101 analysis in a significant and fundamental manner by presenting patent eligibility under § 101 as predominately a question of fact.”).

220. *Id.* at 1364 (Reyna, J., dissenting) (“The Court’s treatment of the ‘inventive concept’ search at step two makes clear that this inquiry is predominately a legal question focused on *the claims*.”).

221. *Id.* at 1367 (Reyna, J., dissenting) (“When construing patent claims, the court may rely on factual findings in some instances, but predominately construes the terms according to the claims and specification, i.e., a purely legal determination.”).

of the patent when possible and viewing extrinsic evidence rarely, similar to claim construction and contract interpretation.²²²

The decisions in *Aatrix* and *Berkheimer* were initially praised by members of the patent community who hoped for fewer dismissals.²²³ Since these cases issued, the Federal Circuit has consistently cited them for the proposition that the subject matter eligibility analysis contains underlying questions of fact.²²⁴ In theory, this standard should reduce the number of claims dismissed on the pleadings. However, outcomes since the decisions in *Aatrix* and *Berkheimer* have still leaned toward dismissal.²²⁵

D. The Federal Circuit's Treatment of Rule 12(b)(6) and 12(c) Motions for Subject Matter Ineligibility after Aatrix

1. The Federal Circuit has continued affirming dismissals for lack of subject matter eligibility after *Aatrix*.

The Federal Circuit affirmed dismissal for lack of subject matter eligibility in eight opinions after the *Aatrix* decision.²²⁶ This string of dismissals tempered the optimism of some members of the patent community and gave the impression that *Aatrix* would be applied narrowly.²²⁷ The decision in *Interval Licensing, LLC v. AOL, Inc.* sparked

222. *Id.* at 1368 (Reyna, J., dissenting) (“Accordingly, just as in claim construction and contract interpretation, looking beyond the four corners of the patent should only occur in exceptional circumstances.”).

223. Addy, *supra* note 193 (“Maybe I’m being too optimistic. But in a pair of decisions issued within a week of each other, *Berkheimer v. HP* and *Aatrix Software v. Green Shades*, the Federal Circuit just vacated two patent ineligibility determinations. . . . This comes as more than a relief.”).

224. See *SAP Am., Inc. v. Investpic, LLC*, 890 F.3d 1016, 1020 (Fed. Cir. 2018); *Interval Licensing, LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018).

225. See *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 763 (Fed. Cir. 2019); *Voit Techs., LLC v. Del-Ton, Inc.*, 757 Fed. Appx. 1000, 1000 (Fed. Cir. 2019); *Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, 915 F.3d 743, 743 (Fed. Cir. 2019); *Glasswall Sols., Ltd. v. Clearswift, Ltd.*, 754 Fed. Appx. 996, 997 (Fed. Cir. 2018); *Data Engine Techs., LLC v. Google, LLC*, 906 F.3d 999, 1002 (Fed. Cir. 2018); *Interval Licensing*, 896 F.3d at 1336; *Burnett v. Panasonic Corp.*, 741 Fed. Appx. 777, 778 (Fed. Cir. 2018) (per curiam); *SAP*, 890 F.3d at 1016; *Voter Verified, Inc. v. Election Sys. & Software, LLC*, 887 F.3d 1376, 1376 (Fed. Cir. 2018).

226. *ChargePoint*, 920 F.3d at 763; *Voit Techs.*, 757 Fed. Appx. at 1000; *Athena*, 915 F.3d at 743; *Glasswall*, 754 Fed. Appx. at 997 (Fed. Cir. 2018); *Interval Licensing*, 896 F.3d at 1336; *Burnett*, 741 Fed. Appx. at 777; *SAP*, 890 F.3d at 1018; *Voter Verified*, 887 F.3d at 1379.

227. Burman York Mathis III, *No Light at the End of the Tunnel, Not Even Close*, IPWATCHDOG (Aug. 1, 2018), <https://www.ipwatchdog.com/2018/08/01/no-light-at-the-end-of-the-tunnel/id=99473/> [<https://perma.cc/K8KB-SCHA>] (responding to Ms. Addy’s optimistic article (*supra* note 193) about *Aatrix* and *Berkheimer* saying, “Five months later, it is clear that Ms. Addy was too optimistic.”).

an opinion from Judge Plager concurring-in-part and dissenting-in-part.²²⁸ Judge Plager agreed with the decision to affirm the district court's dismissal of the case under the current subject matter eligibility framework.²²⁹ However, he criticized the current state of subject matter eligibility law, especially the lack of definition for the term abstract idea and the inclusion of a search for an inventive concept.²³⁰ He advocated for intervention from the Supreme Court or Congress.²³¹ But, realizing that that intervention is unlikely to come quickly, he suggested that the district courts postpone deciding eligibility until they examine other patentability issues.²³²

2. The Federal Circuit has reversed dismissals for lack of subject matter eligibility in five cases after the *Aatrix* decision.

After the *Aatrix* decision, the Federal Circuit found dismissed claims eligible in five cases.²³³ In *Data Engine Techs., LLC v. Google, LLC.*, the claims related to a spreadsheet system with tabs for identifying various spreadsheet pages.²³⁴ Data Engine Technologies (DET) brought an infringement suit against Google for infringing three of its patents.²³⁵ Google moved for judgement on the pleadings under Rule 12(c) and the

228. *Interval Licensing*, 896 F.3d at 1348 (Plager, J., concurring-in-part and dissenting-in-part).

229. *Id.* (Plager, J., concurring-in-part and dissenting-in-part) (“I concur in the carefully reasoned opinion by my colleagues in the majority, even though the state of the law is such as to give little confidence that the outcome is necessarily correct.”).

230. *Id.* at 1349–53 (Plager, J., concurring-in-part and dissenting-in-part) (noting that the Court has never defined the term abstract idea, relying on precedent to decide abstractness, and explaining that the concept of an inventive requirement was replaced with the concept of non-obviousness in § 103).

231. *Id.* at 1355–56 (Plager, J., concurring-in-part and dissenting-in-part) (noting that the Supreme Court has little incentive to hear another patent subject matter eligibility case and that a legislative fix, while possible, is unlikely to come quickly).

232. *Id.* at 1355 (Plager, J., concurring-in-part and dissenting-in-part) (“[A] district court in an appropriate case might choose to exercise control over its docket by instructing a defendant who raises an ‘abstract ideas’ § 101 defense that the court will defer addressing that defense until first having the issues in §§ 102, 103, and 112 addressed.”).

233. See *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1307 (Fed. Cir. 2019); *Nat. Alts. Int’l, Inc. v. Creative Compounds, LLC*, 918 F.3d 1338, 1339 (Fed. Cir. 2019); *Endo Pharm. Inc. v. Teva Pharm. USA, Inc.*, 919 F.3d 1347, 1347 (Fed. Cir. 2019); *Data Engine Techs., LLC v. Google, LLC*, 906 F.3d 999, 1000 (Fed. Cir. 2018); *Ancora Techs. v. HTC Am., Inc.*, 908 F.3d 1343, 1343 (Fed. Cir. 2018).

234. *Data Engine*, 906 F.3d at 1003 (“[T]he Tab Patents are directed to and claim a method of implementing a notebook-tabbed interface, which allows users to easily navigate through three-dimensional electronic spreadsheets.”).

235. *Id.* at 1005–06 (giving an exemplary claim from the Tab Patents and the ‘146 patent and stating that DET alleged infringement of claims from these patents).

district court dismissed the case.²³⁶ The Federal Circuit performed the *Alice* test on claims from each patent.²³⁷ One of the claims was eligible because it was not directed to an abstract idea but to a method for navigating spreadsheets that improved computer spreadsheet functionality.²³⁸ Other claims were directed to abstract ideas of storing electronic spreadsheet pages and storing information about changes to spreadsheet data.²³⁹ Therefore, the Federal Circuit affirmed-in-part, reversed-in-part, and remanded the decision to the district court.²⁴⁰

The next decision in which the Federal Circuit found eligible claims is *Ancora Techs. v. HTC Am., Inc.*²⁴¹ The claims were directed to a method for restricting the use of unauthorized software on a computer.²⁴² Ancora filed an action against HTC for patent infringement and HTC moved to dismiss under Rule 12(b)(6).²⁴³ The district court dismissed the case.²⁴⁴ Under the first step of the *Alice* test, the Federal Circuit decided that the claims were not directed to an abstract idea.²⁴⁵ The claims were directed to a specific method for preventing unauthorized use of a program that provided a computer functionality improvement.²⁴⁶ Therefore, the claims were eligible, and the Federal Circuit remanded the case to the district court.²⁴⁷

After *Ancora Techs.*, the Federal Circuit found eligible claims in three cases: *Natural Alternatives International, Inc. v. Creative*

236. *Id.* at 1006 (“Google filed a motion for judgment on the pleadings under Federal Rule of Civil Procedure 12(c), arguing that the asserted claims of the Tab Patents and the ‘146 patent are directed to patent-ineligible subject matter under § 101.”).

237. *See id.* at 1007–13.

238. *Id.* at 1011 (“[W]hen read as a whole, in light of the specification, claim 12 is directed to more than a generic or abstract idea as it claims a particular manner of navigating three-dimensional spreadsheets, implementing an improvement in electronic spreadsheet functionality.”).

239. *Id.* at 1011–13 (explaining that claim 1 of the ‘551 patent and the claims of the ‘146 patent were ineligible).

240. *Id.* at 1013.

241. *Ancora Techs. v. HTC Am., Inc.*, 908 F.3d 1343, 1344 (Fed. Cir. 2018) (“[W]e conclude[] the claims at issue here are not directed to ineligible subject matter.”).

242. *Id.* at 1344–45 (describing the state of the prior art, the asserted invention, and giving a representative claim, claim 1 of the ‘941 patent).

243. *Id.* at 1344 (“Ancora brought this action against HTC America and HTC Corporation in 2016, alleging infringement of the ‘941 patent. HTC moved to dismiss on the ground that the patent’s claims are invalid because their subject matter is ineligible for patenting under 35 U.S.C. § 101.”).

244. *Id.* at 1346.

245. *Id.* at 1348 (“[W]e conclude that claim 1 of the ‘941 patent is not directed to an abstract idea. Improving security . . . can be a non-abstract computer-functionality improvement if done by a specific technique that departs from earlier approaches to solve a specific computer problem.”).

246. *Id.*

247. *Id.* at 1350 (“[W]e hold that HTC has not shown the ‘941 patent’s claims to be invalid under 35 U.S.C. § 101.”).

Compounds, LLC, Endo Pharmaceuticals Inc. v. Teva Pharmaceuticals USA, Inc., and *Cellspin Soft, Inc. v. Fitbit, Inc.*²⁴⁸ In *Natural Alternatives International* and *Endo Pharmaceuticals*, the Federal Circuit decided that the inventions were not related to patent ineligible subject matter under step one of the *Alice* test.²⁴⁹ In *Cellspin Soft*, the claims were related to an abstract idea under step one of the *Alice* test, but Cellspin’s complaint contained allegations that aspects of the claimed invention were not conventional.²⁵⁰ Therefore, the Federal Circuit reversed the district court’s dismissal.²⁵¹

As of the time of writing, *Cellspin Soft* is the most recent case in which the Federal Circuit reversed a dismissal of a case for lack of patent subject matter eligibility.²⁵² The next section provides an analysis of the Federal Circuit’s treatment of Rule 12 motions to dismiss for lack of subject matter eligibility. The section discusses the impact of an invalidity ruling on the patentee; the consistency of the Federal Circuit’s treatment of the *Alice* test with the Federal Rules of Civil Procedure; and the ability of a court to apply the *Alice* test in a satisfactory manner at the pleading stage of litigation.

IV. ANALYSIS OF THE FEDERAL CIRCUIT’S TREATMENT OF ELIGIBILITY DECISIONS ON THE PLEADINGS AND RECOMMENDATION THAT THE

248. *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1307 (Fed. Cir. 2019); *Endo Pharm. Inc. v. Teva Pharm. USA, Inc.*, 919 F.3d 1347, 1347 (Fed. Cir. 2019); *Nat. Alts. Int’l, Inc. v. Creative Compounds, LLC*, 918 F.3d 1338, 1339 (Fed. Cir. 2019).

249. *Nat. Alts.*, 918 F.3d at 1350 (“The claims at issue are not directed to ineligible subject matter under step one of the *Alice* test.”); *Endo Pharm.*, 919 F.3d at 1357 (“The claims in this case are directed to a new treatment for an ailment, albeit using a natural law or phenomenon. The claims are not directed to the ineligible subject matter itself and, as such, are eligible.”).

250. *Cellspin* 927 F.3d at 1316 (“Having concluded that the claims are directed to an abstract idea, we next consider whether the claimed elements—‘individually and as an ordered combination’—recite an inventive concept. . . . Cellspin’s allegations identify several ways in which its application of capturing, transferring, and publishing data was unconventional.”).

251. *Id.* at 1320 (“We therefore vacate the district court’s dismissal . . .”).

252. After the initial writing of this article, the Federal Circuit issued the opinion *MyMail, Ltd. v. ooVoo, LLC*. In *MyMail*, the Federal Circuit concluded that “the district court erred by failing to address the parties’ claim construction dispute before concluding, on a Rule 12(c) motion, that the MyMail patents are directed to patent-ineligible subject matter under § 101.” *MyMail, Ltd. v. ooVoo, LLC*, 934 F.3d 1373, 1381 (Fed. Cir. 2019). The Federal Circuit refrained from deciding eligibility and remanded the case to the district court. *Id.* The *MyMail* decision is not discussed further in this article.

FEDERAL CIRCUIT DISCOURAGE EARLY DISMISSALS FOR LACK OF
ELIGIBILITY

A. *The Supreme Court's decisions in Mayo and Alice disrupted The Federal Circuit's treatment of Subject Matter Eligibility at the Rule 12 Stage.*

1. The litigation in *Ultramercial* displays how the two-part eligibility test changed the way the Federal Circuit examines eligibility on the pleadings.

Before the Supreme Court's decisions in *Mayo* and *Alice*, motions to dismiss for lack of subject matter eligibility were rare.²⁵³ As displayed in *Ultramercial*, Federal Circuit guidance discouraged Rule 12(b)(6) motions for lack of subject matter eligibility.²⁵⁴ The Federal Circuit considered subject matter eligibility to be a question of law with underlying factual issues.²⁵⁵ These factual issues include whether something is conventional in the art and the scope of preemption.²⁵⁶ Given the factual issues surrounding patent eligibility and the clear and convincing evidence standard for proving invalidity, the Federal Circuit considered dismissal under Rule 12(b)(6) improper under normal circumstances.²⁵⁷

In *Ultramercial*, the Federal Circuit also stated that claim construction was not always necessary before determining subject matter eligibility.²⁵⁸ The Federal Circuit's guidance gave district courts several options on how to proceed, including using the patentee's construction, adopting the construction most favorable to the patentee, and going through a full claim construction procedure before making a decision.²⁵⁹ For the defendant to prevail at the Rule 12(b)(6) stage, the claims must be

253. O'Byrne, *supra* note 13, at 408 (noting that the Federal Circuit stated that Rule 12(b)(6) dismissal for ineligibility would not be proper in most cases).

254. *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir. 2013) ("Rule 12(b)(6) dismissal for lack of eligible subject matter will be the exception, not the rule.").

255. *Id.* ("[T]he analysis under § 101, while ultimately a legal determination, is rife with underlying factual issues.").

256. *Id.* ("Almost by definition, analyzing whether something was 'conventional' or 'routine' involves analyzing facts. Likewise, any inquiry into the scope of preemption—how much of the field is 'tied up' by the claim—by definition will involve historic facts: . . .") (citation omitted).

257. *Id.* ("The presence of factual issues coupled with the requirement for clear and convincing evidence normally will render dismissal under Rule 12(b)(6) improper.").

258. *Id.* ("[C]laim construction may not always be necessary for a § 101 analysis.").

259. *Id.* ("It may also be feasible for the district court to choose to construe the claims in accordance with this court's precedent, or to adopt the construction proffered by the patentee.").

construed so that the only plausible reading is that they are ineligible by clear and convincing evidence.²⁶⁰

As the Supreme Court reshaped the process for determining subject matter eligibility, the *Alice* test became prevalent in determinations of subject matter eligibility at the pleading stage of litigation.²⁶¹ This is apparent when comparing the second and third Federal Circuit decisions in the *Ultramercial* litigation. None of the guidance cautioning district courts from deciding eligibility at the motion to dismiss stage is present in the third decision.²⁶² Instead, the Federal Circuit performed the *Alice* test and found the claims ineligible.²⁶³

2. After *Mayo* and *Alice*, the number of motions to dismiss for lack of eligibility increased sharply.

After the Supreme Court's decision in *Mayo*, practitioners began to implement the strategy of challenging a patent's subject matter eligibility early in litigation.²⁶⁴ This strategy allowed defendants to end cases relatively quickly without going through the expense of discovery.²⁶⁵ The Supreme Court's decision in *Alice* cemented the two-part test as the standard for determining subject matter eligibility, and the Federal Circuit implemented the test at the motion to dismiss stage. After these developments, the strategy of challenging eligibility on the pleadings was often successful and continued to gain popularity.

The success of the strategy to challenge eligibility is evident from the number of cases in which motions to dismiss for lack of subject matter eligibility appear. In 2013, the year before *Alice*, district courts considered

260. *Id.* (“This case involves Rule 12(b)(6), which requires courts to accept the well-pleaded factual allegations as true and to require the accused infringer to establish that the only plausible reading of the claims is that, by clear and convincing evidence, they cover ineligible subject matter.”).

261. *Addy*, *supra* note 12 (“Armed with *Alice*, infringement defendants successfully convinced district courts to use the *Alice* decision’s alleged ‘teachings,’ found in loose language, to suffocate patent infringement cases before they even got started—by invalidating patents on the pleadings.”).

262. *Compare Ultramercial*, 722 F.3d at 1335 with *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 709 (Fed. Cir. 2014).

263. *See Ultramercial* 772 F.3d at 714 (describing the *Alice* test, which the court subsequently applied finding the claims ineligible).

264. *See O’Byrne*, *supra* note 13, at 405 (“[D]efendants charged with infringement of these types of patents have successfully moved for early dismissal of method claims on the grounds that the claims asserted against them were nothing more than ‘abstract ideas’ and therefore outside the scope of patent eligible subject matter.”).

265. *Gugliuzza*, *supra* note 7, at 624 (“[S]everal of the new mechanisms of quick decisions provide routes to resolve patent disputes before discovery, which is when litigation costs begin to escalate significantly . . .”).

11 motions to dismiss for lack of subject matter eligibility.²⁶⁶ In 2014, that number rose to 24.²⁶⁷ In 2015, the year after the Supreme Court decided *Alice*, the district courts considered 101 motions to dismiss for lack of subject matter ineligibility.²⁶⁸

3. The Federal Circuit usually affirms pleading stage dismissals for lack of eligibility.

Since *Alice*, the Federal Circuit has issued opinions in 29 cases in which the district court granted a motion to dismiss for lack of subject matter eligibility.²⁶⁹ The Federal Circuit affirmed the district court's dismissal in 20 of those cases,²⁷⁰ reversed the district court's dismissal in

266. *Id.* at 660 (“In 2016, district courts decided 149 pleading-stage eligibility motions, up from 101 in 2015, 24 in 2014, and 11 in 2013.”).

267. *Id.*

268. *Id.*

269. *See* *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1307 (Fed. Cir. 2019); *Endo Pharm. Inc. v. Teva Pharm. USA, Inc.*, 919 F.3d 1347, 1347 (Fed. Cir. 2019); *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 763 (Fed. Cir. 2019); *Nat. Alts. Int’l, Inc. v. Creative Compounds, LLC*, 918 F.3d 1338, 1339 (Fed. Cir. 2019); *Voit Techs., LLC v. Del-Ton, Inc.*, 757 Fed. Appx. 1000, 1000 (Fed. Cir. 2019); *Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, 915 F.3d 743, 743 (Fed. Cir. 2019); *Glasswall Sols., Ltd. v. Clearswift, Ltd.*, 754 Fed. Appx. 996, 997 (Fed. Cir. 2018); *Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1343 (Fed. Cir. 2018); *Data Engine Techs., LLC v. Google, LLC*, 906 F.3d 999, 1000 (Fed. Cir. 2018); *Interval Licensing, LLC v. AOL, Inc.*, 896 F.3d 1335, 1336 (Fed. Cir. 2018); *Burnett v. Panasonic Corp.*, 741 Fed. Appx. 777, 778 (Fed. Cir. 2018) (per curiam); *SAP Am., Inc. v. Investpic, LLC*, 890 F.3d 1016, 1018 (Fed. Cir. 2018); *Voter Verified, Inc. v. Election Sys. & Software, LLC*, 887 F.3d 1376, 1379 (Fed. Cir. 2018); *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1122 (Fed. Cir. 2018); *Intellectual Ventures I, LLC v. Erie Indem. Co.*, 711 Fed. Appx. 1012, 1012 (Fed. Cir. 2017); *Two-Way Media, Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1329 (Fed. Cir. 2017); *Secured Mail Sols., LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 907 (Fed. Cir. 2017); *Visual Memory, LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1253 (Fed. Cir. 2017); *Cleveland Clinic Found. v. True Health Diagnostics, LLC*, 859 F.3d 1352, 1352 (Fed. Cir. 2017); *Intellectual Ventures I, LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1315 (Fed. Cir. 2017); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1091 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1300 (Fed. Cir. 2016); *Shortridge v. Found. Constr. Payroll Serv., LLC*, 655 Fed. Appx. 848, 848 (Fed. Cir. 2016) (per curiam); *BASCOM Glob. Internet Servs. v. AT&T Mobility, LLC*, 827 F.3d 1341, 1342 (Fed. Cir. 2016); *TLI Commc’ns, LLC v. AV Auto., LLC*, 823 F.3d 607, 607 (Fed. Cir. 2016); *Genetic Techs., Ltd. v. Merial, LLC*, 818 F.3d 1369, 1369 (Fed. Cir. 2016); *Vehicle Intelligence & Safety, LLC v. Mercedes-Benz USA, LLC*, 635 Fed. Appx. 914, 915 (Fed. Cir. 2015) (per curiam); *Content Extraction & Transmission, LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1343 (Fed. Cir. 2014); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 710 (Fed. Cir. 2014).

270. *See* *ChargePoint*, 920 F.3d at 763; *Voit*, 757 Fed. Appx. at 1000; *Athena Diagnostics*, 915 F.3d at 743; *Glasswall*, 754 Fed. Appx. at 997; *Interval Licensing*, 896 F.3d at 1336; *Burnett*, 741 Fed. Appx. at 778; *SAP*, 890 F.3d at 1018; *Voter Verified*, 887 F.3d at 1376; *Two-Way*, 874 F.3d at 1329; *Intellectual Ventures*, 711 Fed. Appx. at 1012; *Secured Mail*, 873 F.3d at 905; *Cleveland Clinic Found.*, 859 F.3d at 1352; *Intellectual Ventures*, 850 F.3d at 1315; *FairWarning IP*, 839 F.3d at 1089; *Shortridge*, 655 Fed. Appx. at 848; *TLI Commc’ns*, 823 F.3d at 607; *Genetic Techs.*, 818 F.3d at 1369;

eight cases,²⁷¹ and affirmed-in-part and reversed-in-part in one case.²⁷² These figures only take into account cases in which the Federal Circuit issued a written opinion. Under Federal Circuit Rule 36, the court can affirm a judgement without issuing a written opinion.²⁷³ Rule 36 has been used to affirm district court dismissals for lack of subject matter eligibility on the pleadings.²⁷⁴ However, Rule 36 affirmances are not considered in these figures.

The Federal Circuit affirms dismissal for lack of subject matter eligibility a majority of the time.²⁷⁵ The Federal Circuit's formula when reviewing these cases is to review the claims at issue, state the *Alice* test, and perform the *Alice* test. The Federal Circuit rarely addresses the standards for examining Rule 12(b)(6) or Rule 12(c) motions or their impact on the *Alice* test. A notable exception to this formula is found in the *Aatrix* decision, where the Federal Circuit gave guidance specific to determining eligibility on the pleadings.²⁷⁶

4. *Aatrix* may signal a return to the reasoning against deciding eligibility on the pleadings outlined in the second *Ultramercial* decision.

In *Aatrix*, the Federal Circuit stated that the question of subject matter eligibility was a question of law with underlying questions of fact and that factual allegations taken in the light most favorable to the plaintiff may preclude a dismissal at the pleading stage.²⁷⁷ After *Alice*, the Federal Circuit primarily referred to subject matter eligibility as a pure question of law, which made it easier for defendants to successfully invalidate

Vehicle Intelligence, 635 Fed. Appx. at 915; *Content Extraction*, 776 F.3d at 1343; *Ultramercial*, 772 F.3d at 710.

271. See *Cellspin Soft*, 927 F.3d at 1307; *Endo Pharm.*, 919 F.3d at 1347; *Nat. Alts.*, 918 F.3d at 1339; *Ancora*, 908 F.3d at 1343; *Aatrix*, 882 F.3d at 1121; *Visual Memory*, 867 F.3d at 1253; *McRO*, 837 F.3d at 1300; *BASCOM*, 827 F.3d at 1342.

272. See *Data Engine*, 906 F.3d at 1000.

273. FED. CIR. R. 36. ("The court may enter a judgment of affirmance without opinion.")

274. *Addy*, *supra* note 12 ("In most cases, the Court declined to craft any sort of explanatory opinion, relying instead on its ability to issue a one-word decision—'Affirmed.'").

275. See *Addy*, *supra* note 12 ("After four years, over 90% of cases appealed to the Federal Circuit on patent ineligibility grounds have been affirmed.")

276. See *Aatrix*, 882 F.3d at 1125 (stating that eligibility can be determined at the Rule 12 stage and describing the standards from making that determination).

277. *Id.* ("This is true only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.")

patents for lack of subject matter eligibility on the pleadings.²⁷⁸ After *Aatrix*, the Federal Circuit has consistently referred to subject matter eligibility as a question of law with underlying questions of fact.²⁷⁹

Aatrix marks a return to some of the reasoning in *Ultramercial* for avoiding subject matter eligibility determinations on the pleadings. However, the Federal Circuit seems to be construing *Aatrix* narrowly²⁸⁰ and continues to consistently affirm invalidations for lack of eligibility on the pleadings.²⁸¹ The Federal Circuit has the tools it needs to curb subject matter eligibility dismissals on the pleadings; it just needs to implement them.

B. The Federal Circuit's current application of the Alice test at the Rule 12 stage favors alleged infringers.

The Federal Circuit should provide guidance against determining subject matter eligibility on the pleadings because its current application of the *Alice* test favors alleged infringers. While examining patent eligibility on the pleadings, courts usually perform the *Alice* test and decide whether the patent is invalid for claiming unpatentable subject matter.

A ruling of invalidity has serious consequences for an inventor or patent holder.²⁸² When a court invalidates a patent, the patentee loses all rights granted by the patent.²⁸³ The inventor or patent holder loses the current lawsuit and is prevented from enforcing the patent against any other infringers in the future. A ruling of invalidity in a previous case is a complete defense to infringement in a latter case; however, a patent that

278. *E.g.*, *Intellectual Ventures I, LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1325 (Fed. Cir. 2017); *Genetic Techs., Ltd. v. Merial, LLC*, 818 F.3d 1369, 1373 (Fed. Cir. 2016); *Vehicle Intelligence & Safety, LLC v. Mercedes-Benz USA, LLC*, 635 Fed. Appx. 914, 917 (Fed. Cir. 2015) (per curiam).

279. *E.g.*, *SAP Am., Inc. v. Investpic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018); *Interval Licensing, LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018); *Ancora Techs. v. HTC Am., Inc.*, 908 F.3d 1343, 1350 (Fed. Cir. 2018).

280. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1359 (Fed. Cir. 2018) (Moore, J., concurring) (“Our decisions in *Berkheimer* and *Aatrix* are narrow: to the extent it is at issue in the case, whether a claim element or combination is well-understood, routine, and conventional is a question of fact.”).

281. *E.g.*, *Voter Verified, Inc. v. Election Sys. & Software, LLC*, 887 F.3d 1376, 1379 (Fed. Cir. 2018); *SAP Am., Inc. v. Investpic, LLC*, 890 F.3d 1016, 1018 (Fed. Cir. 2018); *Burnett v. Panasonic Corp.*, 741 Fed. Appx. 777, 778 (Fed. Cir. 2018).

282. *Gugliuzza*, *supra* note 7, at 628 (“A ruling of patent invalidity is the outcome of a patent case that can have the most significant impact going forward, both on the parties and on nonparties.”).

283. *Id.* (“[O]nce a litigant convinces a court to hold a particular patent invalid, any litigant accused of infringing the same patent in the future may use that invalidity decision as a complete defense.”).

is found valid in one case may still be invalidated in a later case.²⁸⁴ In a scenario where an inventor's patent is infringed by multiple parties, the patentee must successfully argue infringement in each case. However, if the first alleged infringer successfully argues invalidity, the inventor not only loses that case but also can no longer assert his patent rights against any of the other alleged infringers. The permanence of an invalidity ruling presents patent holders with a large risk when asserting patent rights.

This system is designed to prevent patent holders from broadly asserting weak patents.²⁸⁵ However, this system, designed to protect defendants, can also be used offensively by alleged infringers to deter infringement suits when invalidity decisions become easy to obtain. If invalidity rulings are too easy to achieve, then the risk patent holders face when asserting patent rights becomes too high. If inventors are not able to effectively assert patents, then the incentive for inventors to seek patent protection drastically decreases.

Society may see short term benefits when a patent is invalidated. Technology disclosed in the patent becomes free for others to use. However, if invalidity decisions are too easy to obtain and patent holders cannot enjoy the rights a patent grants, then the use of the patent system may decline. Disclosure of inventions to the public would then decrease and harm the progress of technology in the long run.

After *Mayo* and *Alice*, alleged infringers adopted the strategy of challenging the validity of patents at the pleading stage.²⁸⁶ This strategy worked well for challenging subject matter eligibility because it is the least factually intensive validity analysis and the decisions in *Mayo* and *Alice* made subject matter eligibility more difficult to prove for several technologies, including computer software, medical diagnostics, and biotechnology.²⁸⁷ The Federal Circuit's consistent affirmation of dismissals for lack of eligibility encourages defendants to continue using

284. *Id.* (“Thus, although a patentee may not use a ruling that its patent is not invalid offensively in a future case, an accused infringer may *defensively* use a prior ruling that a patent *is* invalid.”) (footnote omitted).

285. *See id.* at 663 (“[E]ligibility provides a mechanism to dismiss low-merit suits before the parties incur significant litigation costs.”).

286. Addy, *supra* note 12 (“Armed with *Alice*, infringement defendants successfully convinced district courts to use the *Alice* decision’s alleged ‘teachings,’ found in loose language, to suffocate patent infringement cases before they even got started—by invalidating patents on the pleadings.”).

287. *See* Garza, *supra* note 33, at 5 (“[S]oftware patents have had a difficult time with eligibility.”); Shai Jalfin, *6 Years Later: The Effects of the Mayo Decision on Diagnostic Methods*, IPWATCHDOG (Jul. 19, 2018), <https://www.ipwatchdog.com/2018/07/19/6-years-later-effects-mayo-decision-diagnostic-methods/id=99206/> [<https://perma.cc/WKY5-88QE>] (“In the 6 years since *Mayo*, the life sciences have been hit hard, with the validity of method patents being frequently—and successfully—challenged.”).

motions at the pleading stage to invalidate patents.²⁸⁸ The Federal Circuit's consistent affirmation of dismissals also encourages district courts to continue making determinations of eligibility on the pleadings to quickly resolve cases.²⁸⁹

There is a balance between protecting defendants from excessive assertion of weak patents and making patents so easy to invalidate that patent holders cannot effectively assert their rights. These quick decisions of subject matter eligibility on the pleadings favor alleged infringers by making it too risky for inventors and patent holders to assert their patents. As a result, certain technological areas including computer software, medical diagnostics and biotechnology are being harmed. A decision of invalidity has significant consequences, and these decisions should not be made lightly. The Federal Circuit currently favors quick eligibility decisions and therefore favors alleged infringers. The Federal Circuit should provide guidance to the district courts preventing decisions of eligibility at the Rule 12 stage so that patentees, the people who innovate and advance technology, are favored.

C. *The Federal Circuit's application of the Alice test at the Rule 12 stage is not consistent with the standards for evaluating the sufficiency of pleadings.*

Determining subject matter eligibility on the pleadings in tension with the standards for pleadings and the presumption of validity of patents. Under the standards described in *Twombly* and *Iqbal*, a complaint survives a motion to dismiss when the claim for relief is plausible.²⁹⁰ When examining a motion to dismiss, courts must make take all alleged facts in the complaint as true.²⁹¹ The decisions in *Berkheimer* and *Aatrix* show that the subject matter eligibility analysis contains underlying

288. See O'Byrne, *supra* note 13, at 406 ("Seizing the opportunity created by the trend of invalidating method claims under § 101 and the factious nature of the appellate rulings that have considered this issue, defendants have sought early dismissal or disposition pursuant to Rule 12(b)(6) and Rule 12(c) on § 101 grounds.").

289. See Addy, *supra* note 12 ("Armed with *Alice*, infringement defendants successfully convinced district courts to use the *Alice* decision's alleged 'teachings,' found in loose language, to suffocate patent infringement cases before they even got started—by invalidating patents on the pleadings.").

290. *Ashcroft v. Iqbal*, 566 U.S. 662, 678 (2009) ("To survive a motion to dismiss, a complaint must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'").

291. *Id.* ("[A] court must accept as true all of the allegations contained in a complaint is inapplicable to legal conclusions.").

factual issues.²⁹² When examining eligibility on the pleadings, the courts usually perform the *Alice* test and decide whether the claims are eligible. However, this practice tends to ignore the factual considerations. Performing the *Alice* test to determine eligibility is not the same as examining whether the plaintiff has made a plausible complaint.

Instead of quickly providing a ruling on eligibility in response to a Rule 12(b)(6) or Rule 12(c) motion, courts should consider whether there is a plausible claim construction and plausible factual allegations that make the claims eligible. To successfully invalidate a patent on the pleadings, the defendant should have to show that there is no plausible claim construction or factual allegations that make the claims eligible.²⁹³

Additionally, patents are presumed to be valid.²⁹⁴ So, to prevail on the pleadings, the defendant should have to show by clear and convincing evidence that there is no plausible claim construction and set of facts under which the patent is eligible.²⁹⁵

Each issued patent has gone through examination at the patent office. If the patent office determined that a claim set is allowable, then the office construed the claims in a manner that meets the subject matter eligibility requirements during examination. The fact that the patent office found a claim construction in which the claims are eligible should weigh heavily in favor of a finding that there is a plausible claim construction that renders the patent valid.

The Federal Circuit should provide guidance that shifts the focus of eligibility determinations on the pleadings from performing the *Alice* test to examining whether there is a plausible claim construction and set of facts that would render the patent eligible. Shifting the focus from the *Alice* test to the plausibility of the pleadings will bring the subject matter eligibility analysis at the pleading stage into line with the standards for evaluating pleadings outlined in *Twombly* and *Iqbal*.²⁹⁶ It will also give

292. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) (“Patent eligibility under 35 U.S.C. § 101 is ultimately an issue of law we review de novo. The patent eligibility inquiry may contain underlying issues of fact.”) (citation omitted); *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018) (“We have held that patent eligibility can be determined at the Rule 12(b)(6) stage. This is true only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.”) (citation omitted).

293. *See Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir. 2013) (“[T]he *only* plausible reading of the patent must be that there is clear and convincing evidence of ineligibility.”).

294. *Id.* at 1338 (“[E]very issued patent is presumed to have been issued properly, absent clear and convincing evidence to the contrary.”).

295. *See id.*

296. *See Gugliuzza, supra* note 7, at 662 (“But explicitly acknowledging the factual components of the eligibility analysis would nudge courts to more carefully apply the *Twombly* and *Iqbal* framework. Rather than simply issuing a yes-or-no decision on the patent’s validity, as sometimes

courts the chance to apply the presumption of validity to the eligibility analysis at the pleading stage.

D. The Alice test is not conducive to implementation at the Rule 12 stage when the record is undeveloped.

The Federal Circuit should provide guidance against deciding eligibility on the pleadings because the *Alice* test is not conducive to being performed at the pleading stage of litigation. When the Supreme Court created the two-step test for patent eligibility in *Mayo*, it was examining a case at the motion for summary judgement stage of litigation.²⁹⁷ When the Court solidified this test in *Alice*, the case was also at the summary judgement stage.²⁹⁸ Afterwards, the Federal Circuit and district courts have been applying the *Alice* test early in litigation at the pleading stage.²⁹⁹ However, the structure of the *Alice* test makes it difficult to perform adequately at the pleading stage of litigation.

Both steps of the *Alice* test are focused on the claims.³⁰⁰ When the Supreme Court created and applied the *Alice* test, it had the benefit of a developed record. However, the record is not well developed at the pleading stage, and this becomes problematic when examining the claims. Summary judgement usually occurs after claim construction, so the court and parties know how the claims are interpreted. Before claim construction, the claims usually contain some level of ambiguity that causes the parties to disagree on their scope. While ambiguity and disagreement are present, it is more difficult for the court to determine whether the claims are directed to a patent ineligible concept and whether there are additional elements that could transform the claim into an eligible application.³⁰¹

seems to be the case, dismissal would be appropriate only if, viewing the relevant facts in the light most favorable to the patentee, there is no plausible case that the patent satisfies the eligibility requirement.”) (citation omitted).

297. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 76 (2012) (“[T]he District Court ultimately granted summary judgment in Mayo’s favor.”).

298. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 214 (2014) (“[T]he parties filed cross-motions for summary judgment on whether the asserted claims are eligible for patent protection under 35 U.S.C. § 101.”).

299. *Addy*, *supra* note 12 (“Armed with *Alice*, infringement defendants successfully convinced district courts to use the *Alice* decision’s alleged ‘teachings,’ found in loose language, to suffocate patent infringement cases before they even got started—by invalidating patents on the pleadings.”).

300. *See Alice*, 573 U.S. at 217 (“First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, ‘what else is there in the claims before us?’”) (citation omitted).

301. *See McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1311 (Fed. Cir. 2016) (“[I]n this case, claim construction is helpful to resolve the question of patentability under § 101.

The Federal Circuit has repeatedly stated that subject matter eligibility can be determined without claim construction.³⁰² At the same time, however, the court praises the helpfulness of claim construction in determining eligibility.³⁰³ Instead of stating that claim construction is not required to determine eligibility, the Federal Circuit should give specific guidance on how to treat claim construction when examining eligibility on the pleadings.

The Federal Circuit should return to the guidance it gave in *Ultramercial*. When examining eligibility at the Rule 12 stage without claim construction, the court should use the plaintiff's claim construction or the claim construction most favorable to the plaintiff.³⁰⁴ Alternatively, the court could postpone an eligibility determination until formal claim construction is complete.³⁰⁵

Both practitioners and judges recognize that the subject matter eligibility analysis has problems and requires further attention from the Supreme Court or Congress.³⁰⁶ However, eligibility is not the only avenue available to defendants to attack a patent's validity. As Judge Plager suggests, the Federal Circuit should encourage district courts to delay deciding eligibility until later in litigation.³⁰⁷ This allows for the court to complete claim construction and allow the factual record to develop. Given the focus of the *Alice* test on the claims and the factual questions underlying the eligibility analysis, allowing the court time to construe the claims and consider underlying facts should result in more consistent

Specifically, the parties' dispute about whether the 'first set of rules' must evaluate sequential phonemes or can evaluate individual phonemes is resolved by the claim language.").

302. See *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir. 2013) ("[C]laim construction may not always be necessary for a § 101 analysis."); *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018) (stating that the court does not need to perform a full claim construction before deciding a motion to dismiss for lack of eligibility).

303. See *McRO*, 837 F.3d at 1311 ("[I]n this case, claim construction is helpful to resolve the question of patentability under § 101.").

304. See *Ultramercial*, 722 F.3d at 1339 ("It may also be feasible for the district court to choose to construe the claims in accordance with this court's precedent, or to adopt the construction proffered by the patentee.").

305. See *id.* at 1340 ("[T]he question of eligible subject matter must be determined on a claim-by-claim basis. Construing every asserted claim and then conducting a § 101 analysis may not be a wise use of judicial resources.").

306. See *Interval Licensing, LLC v. AOL, Inc.*, 896 F.3d 1335, 1353–55 (Fed. Cir. 2018) (Plager, J., concurring-in-part and dissenting-in-part) (noting that other judges have critiqued the subject matter eligibility analysis and stating that "[t]here is almost universal criticism among commentators and academicians that the 'abstract idea' idea has created havoc in the patent law.").

307. *Id.* at 1355 (Plager, J., concurring-in-part and dissenting-in-part) ("[A] district court in an appropriate case might choose to exercise control over its docket by instructing a defendant who raises an 'abstract ideas' § 101 defense that the court will defer addressing that defense until first having the issues in §§ 102, 103, and 112 addressed.").

eligibility decisions. Alternatively, if the patent is invalid on other grounds, then the court could avoid the eligibility question entirely. Avoiding the question of eligibility may be the best course of action to pursue until the Supreme Court or Congress reforms the standard for determining subject matter eligibility.³⁰⁸

V. CONCLUSION

After the Supreme Court's decision in *Alice Corp. v. CLS Bank*, there has been an increase in Rule 12 motions to dismiss for lack of subject matter eligibility. These motions are often granted at the district court level and predominantly upheld by the Federal Circuit. This trend creates a hostile environment for inventors and patent holders and threatens to curb innovation in various areas like computer software, biotechnology, and medical diagnostics. The Federal Circuit's current application of the *Alice* test at the Rule 12 stage favors alleged infringers and is inconsistent with the standards for evaluating pleadings. Additionally, the *Alice* test is not conducive to being performed at the pleading stage of litigation. Therefore, the Federal Circuit should instruct the district courts to refrain from deciding eligibility at the pleading stage of litigation.

308. See *id.* at 1356 (Plager, J., concurring in part and dissenting in part) (“Even a cursory look at the claims in our recent § 101 ‘abstract ideas’ cases suggests how many of those cases would just go away as soon as the well-understood statutory criteria are applied to the challenged claims.”).