

United States Court of Appeals for the Federal Circuit

AATRIX SOFTWARE, INC.,
Plaintiff-Appellant

v.

GREEN SHADES SOFTWARE, INC.,
Defendant-Appellee

2017-1452

Appeal from the United States District Court for the
Middle District of Florida in No. 3:15-cv-00164-HES-
MCR, Senior Judge Harvey E. Schlesinger.

ON PETITION FOR REHEARING EN BANC

JOHN BENTLEY LUNSETH, II, Briggs & Morgan, PA,
Minneapolis, MN, filed a response to the petition for
plaintiff-appellant. Also represented by SCOTT MICHAEL
FLAHERTY.

HAROLD TIMOTHY GILLIS, Shutts & Bowen LLP,
Jacksonville, FL, filed a petition for rehearing en banc for
defendant-appellee. Also represented by JOSEPH W. BAIN,
West Palm Beach, FL.

2 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK,
MOORE, O'MALLEY, REYNA, WALLACH, TARANTO, CHEN,
HUGHES, and STOLL, *Circuit Judges*.

MOORE, *Circuit Judge*, with whom DYK, O'MALLEY,
TARANTO, and STOLL, *Circuit Judges*, join, concurs in the
denial of the petition for rehearing en banc.

LOURIE, *Circuit Judge*, with whom NEWMAN, *Circuit
Judge*, joins, concurs in the denial of the petition for
rehearing en banc.

REYNA, *Circuit Judge*, dissents from the denial of the
petition for rehearing en banc.

PER CURIAM.

ORDER

Appellee Green Shades Software, Inc. filed a petition
for rehearing en banc. A response to the petition was
invited by the court and filed by Appellant Aatrix Soft-
ware, Inc. The petition and response were first referred
to the panel that heard the appeal, and thereafter, to the
circuit judges who are in regular active service. A poll
was requested, taken, and failed.

Upon consideration thereof,

IT IS ORDERED THAT:

- 1) The petition for panel rehearing is denied.
- 2) The petition for rehearing en banc is denied.
- 3) The mandate of the court will issue on June 7,
2018.

FOR THE COURT

May 31, 2018
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

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MOORE, *Circuit Judge*, with whom DYK, O'MALLEY, TARANTO, and STOLL, *Circuit Judges*, join, concurring in the denial of the petition for rehearing en banc.

Berkheimer and *Aatrix* stand for the unremarkable proposition that whether a claim element or combination of elements would have been well-understood, routine, and conventional to a skilled artisan in the relevant field at a particular point in time is a question of fact. The Supreme Court has described historical facts as “a recital of external events.” *Thompson v. Keohane*, 516 U.S. 99, 110 (1995). In other words, facts relating to “who did what, when or where, how or why.” *U.S. Bank Nat’l Ass’n ex rel. CWC Capital Asset Mgmt. LLC v. The Village at Lakeridge, LLC*, 138 S. Ct. 960, 966 (2018).

Whether a claim element or combination of elements would have been well-understood, routine, and conventional to a skilled artisan in the relevant field at a particular point in time may require “weigh[ing] evidence,” “mak[ing] credibility judgments,” and addressing “narrow facts that utterly resist generalization.” *Id.* at 967 (quoting *Pierce v. Underwood*, 487 U.S. 552, 561–62 (1988)). The Supreme Court in *Alice* asked whether the claimed activities were “previously known to the industry,” and in *Mayo* asked whether they were “previously engaged in by researchers in the field.”¹ *Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2359 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 73 (2012). 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.” *Mayo*, 566 U.S. at 90. “[C]ase law from the Supreme Court and this court has stated for decades that anticipation is a factual question.” *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1068 (Fed. Cir. 2017). While the ultimate question of patent eligibility is one of law, it is not surprising that it may contain underlying issues of fact. Every other type of validity challenge

¹ It has been suggested that contrary to these pronouncements by the Supreme Court, whether claim limitations involve well-understood, routine, and conventional activities should *not* be assessed from the perspective of a person of ordinary skill in the art. The alternative is unclear, the reasonable judge? Such a conclusion would be at odds with all patentability questions, which are assessed from the perspective of the ordinarily skilled artisan. It would be bizarre, indeed, if we assessed the question from the perspective of a jurist because for much of the technology we encounter, very little would be well-understood, routine, and conventional to the jurist.

is either entirely factual (e.g., anticipation, written description, utility), a question of law with underlying facts (e.g., obviousness, enablement), or a question of law that may contain underlying facts (e.g., indefiniteness).²

This question may require weighing evidence to determine whether the additional limitations beyond the abstract idea, natural phenomenon, or law of nature would have been well-understood, routine, and conventional to an ordinarily skilled artisan. Because the patent challenger bears the burden of demonstrating that the claims lack patent eligibility, 35 U.S.C. § 282(a), there must be evidence supporting a finding that the additional elements were well-understood, routine, and conventional. Relying on the specification alone may be appropriate where, as in *Mayo*, the specification *admits* as much. 566 U.S. at 79; *see also id.* at 73–74. In *Mayo*, the Court considered disclosures in the specification of the patent about the claimed techniques being “routinely” used and “well known in the art.” *Id.* at 73–74, 79. Based on these disclosures, the Court held that “any additional steps [beyond the law of nature] consist of well-understood, routine, conventional activity already engaged in by the scientific community” that “add nothing significant be-

² It would be odd to suggest that § 101 is not an invalidity challenge. It falls under Part II, Chapter 10 of the Patent Act entitled Patentability of Inventions. It sits alongside §§ 102, 103 and 112, which likewise articulate validity concerns. Moreover, the single sentence in § 101 actually contains two patentability requirements: eligibility and utility. Both have long been treated by courts as questions of validity. *See, e.g., Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1349 (Fed. Cir. 2015); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1259 (Fed. Cir. 2014); *Juicy Whip, Inc. v. Orange Bang, Inc.*, 185 F.3d 1364, 1367 (Fed. Cir. 1999).

4 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

yond the sum of their parts taken separately.” *Id.* at 79–80. In a situation where the specification admits the additional claim elements are well-understood, routine, and conventional, it will be difficult, if not impossible, for a patentee to show a genuine dispute. *Cf. Pharmastem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1362 (Fed. Cir. 2007) (stating that “[a]dmissions in the specification regarding the prior art are binding on the patentee for purposes of a later inquiry into obviousness”).³

As this is a factual question, the normal procedural standards for fact questions must apply, including the rules in the Federal Rules of Civil Procedure applicable to motions to dismiss or for summary judgment and the standards in the Federal Rules of Evidence for admissions and judicial notice. *See SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 137 S. Ct. 954, 964 (2017) (stating that “the same common-law principles, methods of statutory interpretation, and procedural rules as other areas of civil litigation” also govern patent law). Though we are a court of special jurisdiction, we are not free to create specialized rules for patent law that contradict well-established, general legal principles. *See Teva*, 135 S. Ct. at 840; *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1748–49 (2014); *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 393–94 (2006).

³ When claim construction is limited to the intrinsic evidence, we review it de novo. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). However, construing claims in light of the specification differs from determining whether claim limitations recite activities that were well-understood, routine, and conventional in the relevant field at a particular point in time. The latter is a question of historical fact, not a legal question of claim scope.

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 5

If there is a genuine dispute of material fact, Rule 56 requires that summary judgment be denied. In *Berkheimer*, there was such a genuine dispute for claims 4–7, but not for claims 1–3 and 9. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1370 (Fed. Cir. 2018). The specification described the increases in efficiency and computer functionality that the invention, in claims 4–7, had over conventional digital asset management systems. *Id.* at 1369 (citing U.S. Patent No. 7,447,713 at 1:24–27, 2:22–26, 16:52–60). It further stated that “known asset management systems” did not contain the one-to-many claim element and its advantages, ’713 patent at 2:23–26, and that redundant document images “are the convention” in “today’s digital asset management systems,” *id.* at 1:24–27. While assertions in the patent will not always be enough to create a genuine dispute of material fact, they did so here. HP’s evidence focused almost exclusively on the limitations of claim 1. See J.A. at 1054–62, *Berkheimer*, 881 F.3d 1360. Its only evidence that addressed the additional limitations in claims 4–7 was the conclusory statement from its expert’s declaration that the features disclosed and claimed in the ’713 patent, including one-to-many changes, “were known functions at the time the application was filed” and “[w]hen combined into a single computerized system, these known features perform[ed] the exact same functions to yield predictable results.” *Id.* at 1061. This evidence did not address whether the additional limitations were well understood, routine, and conventional. Based on this evidence, HP fell short of establishing that it was entitled to summary judgment that claims 4–7 are ineligible, a defense it bore the burden of proving. 35 U.S.C. § 282(a). Indeed, beyond its expert’s conclusory declaration, HP could point to no evidence in the record contradicting the statements from the specification. Applying the standard for summary judgment in Rule 56, as we must, summary judgment had to be denied as to claims 4–7. Because no genuine issue of fact existed for claims 1–3 and 9, we affirmed the grant of summary

judgment that those claims were not eligible. As with claims 1–3 and 9, when the evidence that aspects of the invention are not well-understood, routine, and conventional does not pertain to the invention as claimed, it will not create a factual dispute as to these claims. *See also Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1326 (Fed. Cir. 2016) (expert testimony about problems solved by the invention does not create a genuine dispute of material fact when “the claims do not actually contain the ‘conflict-free requirement’”); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1321–22 (Fed. Cir. 2016) (when technological details or particular features set forth in other claims that incorporate an inventive concept are not present in the claims at issue they cannot create a question of fact as to these claims).

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. A motion to dismiss for failure to state a claim must be denied if “in the light most favorable to the plaintiff and with every doubt resolved in the pleader’s favor—but disregarding mere conclusory statements—the complaint states any legally cognizable claim for relief.” 5B Charles Alan Wright & Arthur R. Miller, *Federal Practice and Procedure* § 1357 (3d ed. 2018). In the Eleventh Circuit, the Rule 12(b)(6) standard requires accepting as true the complaint’s factual allegations and construing them in the light most favorable to the plaintiff. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1124 (Fed. Cir. 2018) (citing *Speaker v. U.S. Dep’t of Health & Human Servs. Ctrs. for Disease Control & Prevention*, 623 F.3d 1371, 1379 (11th Cir. 2010)). The second amended complaint in *Aatrix* included “concrete allegations . . . that individual elements and the claimed combination are not well-understood, routine, or conventional activity.” *Id.* at

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 7

1128. For example, it alleged that the patents “improve the functioning of the data processing systems, computers, and other hardware” and explained in detail how the invention achieves these improvements. J.A. at 454 ¶ 107, *Aatrix*, 882 F.3d 1121; *id.* at 429 ¶¶ 38–39. “These allegations suggest[ed] that the claimed invention is directed to an improvement in the computer technology itself and not directed to generic components performing conventional activities.” *Aatrix*, 882 F.3d at 1127. As we have previously held, “[i]n ruling on a 12(b)(6) motion, a court need not ‘accept as true allegations that contradict matters properly subject to judicial notice or by exhibit,’ such as the claims and the patent specification.” *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 913 (Fed. Cir. 2017). But nothing in the limited record we could consider at the Rule 12(b)(6) stage refuted these allegations, so there was no legal basis to affirm the dismissal of the complaint. *See, e.g., Aatrix*, 882 F.3d at 1128. These allegations “at a minimum raise[d] factual disputes underlying the § 101 analysis, such as whether the claim term ‘data file’ constitutes an inventive concept, alone or in combination with other elements, sufficient to survive an *Alice/Mayo* analysis at the Rule 12(b)(6) stage.” *Id.* at 1126.

We cannot adopt a result-oriented approach to end patent litigation at the Rule 12(b)(6) stage that would fail to accept as true the complaint’s factual allegations and construe them in the light most favorable to the plaintiff, as settled law requires. The conclusion that the patent claims in *Aatrix* survived the motion to dismiss is not a holding that they are eligible. And the mere fact that there were sufficient allegations in the pleading to state a claim for patent infringement does not mean that the case need go to trial.

There are many vehicles for early resolution of cases. An accused infringer can move for summary judgment at any time. In fact, under Rule 12(d), the Rule 12(b)(6)

motion could be converted into a summary judgment motion and decided under the summary judgment standard rather than the harder Rule 12(b)(6) standard. Alternatively, the court can raise summary judgment *sua sponte* under Rule 56(f)(3). Moreover, if the allegations in the complaint about the invention as claimed ultimately lack evidentiary support or if the case is exceptional, district courts can award attorneys' fees to the accused infringer under either Rule 11 or § 285 to compensate the accused infringer for any additional litigation costs it incurs.

As stated in *Berkheimer*, “Nothing in this decision should be viewed as casting doubt on the propriety” of our previous cases resolving patent eligibility on motions to dismiss or summary judgment. 881 F.3d at 1368. Indeed, since *Berkheimer* and *Aatrix*, we have continued to uphold decisions concluding that claims were not patent eligible at these stages. *See, e.g., SAP Am., Inc. v. InvestPic LLC*, — F.3d —, 2018 WL 2207254, at *6 (Fed. Cir. 2018) (holding claims ineligible at Rule 12(c) stage); *Voter Verified, Inc. v. Election Sys. & Software LLC*, 887 F.3d 1376, 1385–86 (Fed. Cir. 2018) (same at Rule 12(b)(6) stage); *Maxon, LLC v. Funai Corp., Inc.*, — F. App'x —, 2018 WL 1719101, at *2 (Fed. Cir. 2018) (same); *Intellectual Ventures I LLC v. Symantec Corp.*, — F. App'x —, 2018 WL 1324863, at *1 (Fed. Cir. 2018) (same at summary judgment); *Automated Tracking Sols., LLC v. The Coca-Cola Co.*, — Fed. App'x —, 2018 WL 935455, at *5–6 (Fed. Cir. 2018) (same at Rule 12(c) stage).

Patent law does not protect claims to an “asserted advance in the realm of abstract ideas . . . no matter how groundbreaking the advance.” *SAP Am.*, 2018 WL 2207254, at *6. And in accordance with *Alice*, we have repeatedly recognized the absence of a genuine dispute as to eligibility for the many claims that have been defended as involving an inventive concept based merely on the idea of using existing computers or the Internet to carry

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 9

out conventional processes, with no alteration of computer functionality. See, e.g., *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096–97 (Fed. Cir. 2016) (holding claims ineligible which “merely graft generic computer components onto otherwise-ineligible method claims”); *Intellectual Ventures I LLC v. Capital One Bank*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (“steps that do nothing more than spell out what it means to ‘apply it on computer’ cannot confer eligibility”); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715–16 (Fed. Cir. 2014) (“implement[ing] the abstract idea with routine, conventional activity” and “invocation of the Internet” is not sufficient to save otherwise abstract claims). The established precedents have thus properly permitted pretrial resolution of many eligibility disputes.

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. This inquiry falls under step two in the § 101 framework, in which we “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 78–79). It is clear from *Mayo* that the “inventive concept” cannot be the abstract idea itself, and *Berkheimer* and *Aatrix* leave untouched the numerous cases from this court which have held claims ineligible because the only alleged “inventive concept” is the abstract idea. *Mayo*, 566 U.S. at 72–73 (requiring that “a process that focuses upon the use of a natural law also contain *other elements* or a combination of elements, sometimes referred to as an ‘inventive concept,’ sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself” (emphasis added)). “[A] claim directed to a newly discovered law of nature (or natural phenomenon or abstract

10 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility; instead, the application must provide something inventive, beyond mere ‘well-understood, routine, conventional activity.’” *Genetic Techs. Ltd. v. Merial LLC*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (quoting *Mayo*, 566 U.S. at 73). Whether a claim element is well-understood, routine and conventional to a skilled artisan in the relevant field at a particular time is a fact question, and *Berkheimer* and *Aatrix* merely hold that it must be answered under the normal procedural standards, including the Federal Rules of Civil Procedure standards for motions to dismiss or summary judgment and the Federal Rules of Evidence standards for admissions and judicial notice.

For the foregoing reasons, we concur in the order denying en banc review.

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LOURIE, *Circuit Judge*, with whom NEWMAN, *Circuit Judge*, joins, concurring in the denial of the petition for rehearing en banc.

I concur in the court's declining to rehear this case en banc. There is plausibility to the panel holding that there are fact issues potentially involved in this case concerning the abstract idea exception to patent eligibility. And the panel, and the court, are bound to follow the script that the Supreme Court has written for us in § 101 cases.

However, I believe the law needs clarification by higher authority, perhaps by Congress, to work its way out of what so many in the innovation field consider are § 101 problems. Individual cases, whether heard by this court or the Supreme Court, are imperfect vehicles for

2 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

enunciating broad principles because they are limited to the facts presented. Section 101 issues certainly require attention beyond the power of this court.

We started from the statute that provides for patents on “any new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court put a gloss on this provision by excluding laws of nature, natural phenomena, and abstract ideas. *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 174–75 (1852) (“[A] principle is not patentable. A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.”); *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (“The laws of nature, physical phenomena, and abstract ideas have been held not patentable.”). So far, so good. Laws of nature (Ohm’s Law, Boyle’s Law, the equivalence of matter and energy), properly construed, should not be eligible for patent. Nor should natural phenomena (lightning, earthquakes, rain, gravity, sunlight) or natural products, per se (blood, brain, skin). Of course, the latter are also unpatentable as lacking novelty under § 102.

But it’s in the details that problems and uncertainties have arisen. The Court held in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, that the claim at issue “set forth laws of nature” and was ineligible under § 101 as “a drafting effort designed to monopolize the law of nature itself.” 566 U.S. 66, 77 (2012). That claim recited “[a] method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising” administering a drug and then measuring the level of a metabolite of the drug. *Id.* at 74–75 (quoting U.S. Patent 6,355,623).

The Supreme Court whittled away at the § 101 statute in *Mayo* by analyzing abstract ideas and natural phenomena with a two-step test, including looking for an

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 3

“inventive concept” at step two, thereby bringing aspects of §§ 102 and 103 into the eligibility analysis. *Id.* at 72–73, 90. The decision we now decide not to rehear en banc holds that step two of the two-step analysis may involve the type of fact-finding that underlies §§ 102 and 103, further complicating what used to be a fairly simple analysis of patent eligibility under § 101. We now are interpreting what began, when it rarely arose, as a simple § 101 analysis, as a complicated multiple-step consideration of inventiveness (“something more”), with the result that an increasing amount of inventive research is no longer subject to patent. For example, because the *Mayo* analysis forecloses identifying any “inventive concept” in the discovery of natural phenomena, we have held as ineligible subject matter even meritorious inventions that “combined and utilized man-made tools of biotechnology in a way that revolutionized prenatal care.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (internal quotation marks omitted).

The case before us involves the abstract idea exception to the statute. Abstract ideas indeed should not be subject to patent. They are products of the mind, mental steps, not capable of being controlled by others, regardless what a statute or patent claim might say. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“[M]ental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”). No one should be inhibited from thinking by a patent. See Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813) (“[I]f nature has made any one thing less susceptible, than all others, of exclusive property, it is the action of the thinking power called an Idea.”). Thus, many brilliant and unconventional ideas must be beyond patenting simply because they are “only” ideas, which cannot be monopolized. Moreover such a patent would be unenforceable. Who knows what people are thinking?

4 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

But why should there be a step two in an abstract idea analysis at all? If a method is entirely abstract, is it no less abstract because it contains an inventive step? And, if a claim recites “something more,” an “inventive” physical or technological step, it is not an abstract idea, and can be examined under established patentability provisions such as §§ 102 and 103. Step two’s prohibition on identifying the something more from “computer functions [that] are ‘well-understood, routine, conventional activit[ies]’ previously known to the industry,” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2359 (2014) (alteration in original) (quoting *Mayo*, 566 U.S. at 73), is essentially a §§ 102 and 103 inquiry. Section 101 does not need a two-step analysis to determine whether an idea is abstract.

I therefore believe that § 101 requires further authoritative treatment. Thinking further concerning § 101, but beyond these cases, steps that utilize natural processes, as all mechanical, chemical, and biological steps do, should be patent-eligible, provided they meet the other tests of the statute, including novelty, nonobviousness, and written description. A claim to a natural process itself should not be patentable, not least because it lacks novelty, but also because natural processes should be available to all. But claims to using such processes should not be barred at the threshold of a patentability analysis by being considered natural laws, as a method that utilizes a natural law is not itself a natural law.

The Supreme Court also held in *Association for Molecular Pathology v. Myriad Genetics, Inc.*, that claims to isolated natural products were ineligible for claiming “naturally occurring phenomena.” 569 U.S. 576, 590 (2013). The Court concluded that those claims “are not patent eligible simply because they have been isolated from the surrounding genetic material.” *Id.* at 596.

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 5

However, finding, isolating, and purifying such products are genuine acts of inventiveness, which should be incentivized and rewarded by patents. We are all aware of the need for new antibiotics because bacteria have become resistant to our existing products. Nature, including soil and plants, is a fertile possible source of new antibiotics, but there will be much scientific work to be done to find or discover, isolate, and purify any such products before they can be useful to us. Industry should not be deprived of the incentive to develop such products that a patent creates. But, while they are part of the same patent-eligibility problems we face, these specific issues are not in the cases before us.

Accordingly, I concur in the decision of the court not to rehear this § 101 case en banc. Even if it was decided wrongly, which I doubt, it would not work us out of the current § 101 dilemma. In fact, it digs the hole deeper by further complicating the § 101 analysis. Resolution of patent-eligibility issues requires higher intervention, hopefully with ideas reflective of the best thinking that can be brought to bear on the subject.

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REYNA, *Circuit Judge*, dissenting from the denial of the petition for rehearing *en banc*.

The court's vote to deny *en banc* review of *Aatrix* and *Berkheimer*¹ is a declaration that nothing has changed in

¹ This court's opinion in *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 (Fed. Cir. 2018), was issued six days after the release of the court's opinion in *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018). In *Berkheimer*, HP filed a Petition for Rehearing *En Banc* in which it raised two questions essentially similar to the question that Green Shades raises in its *en banc* petition. As in *Aatrix*, the court in *Berkheimer* voted

2 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

our precedent on patent subject matter eligibility under 35 U.S.C § 101. We are encouraged to move along; there's nothing to see here. I disagree. I believe that, at minimum, the two cases present questions of exceptional importance that this court should address and not avoid.²

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. Stated differently, there is no

to deny HP's, petition for rehearing *en banc*. The two questions raised by HP in *Berkheimer* are:

1. Is the threshold inquiry of patent eligibility under 35 U.S.C. § 101 a question of law without underlying factual issues that might prevent summary judgment?
2. Is the appropriate inquiry under *Alice* step 2 whether the claims transform an abstract idea into a patent-eligible application, or merely "whether the invention describes well-understood, routine and conventional activities"?

Given the similarity in the questions raised in the *Aatrix* and *Berkheimer* petitions for rehearing *en banc*, I filed identical dissents in both.

² Federal Rule of Appellate Procedure 35 and our Internal Operating Procedures provide that *en banc* consideration is required to overrule a precedent of this court. In addition, these rules establish reasons for which *en banc* action should be taken, including the necessity of securing or maintaining uniformity of decisions; involvement of a question of exceptional importance; necessity of overruling a prior holding of this or a predecessor court expressed in an opinion having precedential status; or the initiation, continuation, or resolution of a conflict with another circuit. Based on these rules and procedures, sufficient reason exists here for *en banc* review.

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 3

precedent that the § 101 inquiry is a question of fact. The *Aatrix* and *Berkheimer* decisions are contrary to that well-established precedent.

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. For example, in addressing *Alice* step two, the *Aatrix* and *Berkheimer* panels raised and considered the same, exact question of “whether the invention describes well-understood, routine, and conventional activities.” *Aatrix*, 828 F.3d at 1129; *see also Berkheimer*, 881 F.3d at 1369. After declaring this to be a question of fact, the panels found this question dispositive of the step two analysis. This action has the effect of reducing the entire step two inquiry into what is routine and conventional, rather than determining if an inventive concept expressed in the claims transforms the nature of the claims into a patent-eligible application. Step two is thus divorced from the claims.

Having made this profound change, the court offers no meaningful guidance to the bar, the government, or the public on how to proceed on these new grounds.³ For

³ The reaction of the patent bar and intellectual property community underscores the exceptional importance of the questions presented by this court’s recent decisions and their departure from precedent. On April 19, 2018, the USPTO issued a memorandum of changes in examination procedure in light of *Berkheimer*. USPTO, Memorandum on Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) (Apr. 19, 2018), available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF>. The memorandum highlights that, for the first time, this court

held that “whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.” *Id.* at 2 (citing *Berkheimer*, 881 F.3d at 1369). Accordingly, the memo “revises” the MPEP and changes USPTO examination procedure. *Id.* at 3–5. The memorandum provides that now “an examiner should conclude that an element (or combination of elements) represents well-understood, routine, conventional activity **only** when the examiner can readily conclude that the element(s) is widely prevalent or in common use in the relevant industry” in step two of the *Mayo/Alice* test. *Id.* at 3. The USPTO is also “seeking public comment on its subject matter eligibility guidance, and particularly its guidance in the *Berkheimer* memorandum to the Patent Examining Corps.” Request for Comments on Determining Whether a Claim Element Is Well-Understood, Routine, Conventional for Purposes of Subject Matter Eligibility, 83 Fed. Reg. 17,536 (Apr. 20, 2018).

Further, district courts immediately started relying on these decisions to deny summary judgment motions. *E.g.*, *Vaporstream, Inc. v. Snap Inc.*, No. 2:17-CV-220, 2018 WL 1116530, at *6 (C.D. Cal. Feb. 27, 2018); *Sycamore IP Holdings LLC v. AT & T Corp.*, No. 2:16-CV-588, 2018 WL 936059, at *24 (E.D. Tex. Feb. 16, 2018). Commentators have described the decisions as a “precedential sea change,” in tension with prior cases resolving the eligibility question on the pleadings as a question of law, and conflating the eligibility analysis with that of obviousness. *E.g.*, Dennis Crouch, *Patent Eligibility: Eligibility Analysis and Its Underlying Facts: A Roadmap for Surviving Dismissal on the Pleadings*, PATENTLYO (Feb. 15, 2018), <https://patentlyo.com/patent/2018/02/eligibility-underlying-surviving.html>; Dennis Crouch, *Patent Eligibility: Underlying Questions of Fact*, PATENTLYO (Feb. 8,

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 5

example, to what extent will discovery be allowed to prove or disprove a fact that has been placed in contention? Does this new factual inquiry extend to other aspects of the § 101 inquiry, such as whether a claim is directed to an abstract idea or a natural phenomenon? Can expert opinion supplant the written description? Does the court or jury determine this factual issue? What deference is due to the fact finder? These and similar questions will have to be addressed and resolved by the district courts. Instead of creating a period of uncertainty with the expectation of addressing these issues sometime in the future, this court should address them now.

I.

The Supreme Court has characterized the § 101 patent-eligibility inquiry as a threshold test that precedes the requirements described in §§ 102, 103, and 112. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75 (2012); *Bilski v. Kappos*, 561 U.S. 593, 602 (2010). Consistent with this characterization, this court has held that patent eligibility under § 101 is an issue of law. *See, e.g., Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1331 (Fed. Cir. 2015) (“We review questions concerning compliance with the doctrinal requirements of § 101 of the Patent Act (and its constructions) as questions of law, without deference to the trial forum.”); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362

2018), <https://patentlyo.com/patent/2018/02/eligibility-underlying-questions.html>; Ryan Davis, *Recent Patent-Eligibility Cases Leave Unanswered Questions*, LAW 360 (Mar. 12, 2018), <https://www.law360.com/articles/1020953?scroll=10>.

(Fed. Cir. 2015) (“Patent eligibility under 35 U.S.C. § 101 is an issue of law reviewed *de novo*.”); *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 628 F.3d 1347, 1353 (Fed. Cir. 2010) (“Whether a patent claim is directed to statutory subject matter is a question of law that we review *de novo*.” (citation omitted)), *rev’d on other grounds*, 566 U.S. 66 (2012); *In re Bilski*, 545 F.3d 943, 951 (Fed. Cir. 2008) (en banc) (“Whether a claim is drawn to patent-eligible subject matter under § 101 is an issue of law that we review *de novo*.”), *aff’d in part, rev’d in part*, 561 U.S. 593 (2010). Accordingly, this court has routinely resolved patent-eligibility issues on the pleadings. *See, e.g., FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1349 (Fed. Cir. 2014).

The two-step test for assessing subject matter eligibility under § 101 evolved from framework introduced by the Supreme Court in *Mayo* and refined in *Alice*. First, we determine whether “the claims at issue are directed to one of those patent-ineligible concepts,” i.e., laws of nature, natural phenomena, and abstract ideas. *Alice*, 134 S. Ct. at 2355. If so, we proceed to step two, and consider elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79). This inquiry has been described as a search for other elements or a combination of elements, occasionally referred to as an “inventive concept,” sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law or abstract idea itself. *Mayo*, 566 U.S. at 72–73. Importantly, step two of the analysis is directed to the *remaining elements of the claim*—“[w]hat *else* is there in the claims before us?”—after the court determines that the claim is directed to one of the patent-ineligible concepts. *Mayo*, 566 U.S. at

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 7

78 (emphasis added). The inventive concept determination is limited to the “additional elements” of the claim to determine whether these additional elements transform the nature of the claim into a patent-eligible application. *Alice*, 134 S. Ct. at 2355; *see also Mayo*, 566 U.S. at 77; *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1377 (Fed. Cir. 2015).

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*. The inventive concept cannot merely be alleged; rather, “the *claim* ha[s] to supply a ‘new and useful’ application of the idea in order to be patent eligible.” *Alice*, 134 S. Ct. at 2357 (emphasis added) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972)); *Mayo*, 566 U.S. at 80, 84 (discussing *Diamond v. Diehr*, 450 U.S. 175 (1981), and concluding that although the process claimed a basic mathematical equation, the overall process was patent eligible “because of the way *the additional steps of the process* integrated the equation into the process as a whole”). Evidence of prior art, the prosecution history, and allegations of inventiveness are of no significance if these alleged innovative concepts are not captured by the claims. *See Recognicorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“To save a patent at step two, an inventive concept must be evident *in the claims*.” (emphasis added)). Thus, both steps of *Alice* are legal questions that the court must resolve by looking at the claims and written description. *See Content Extraction*, 776 F.3d at 1347.

Contrary to this established body of law, the majority opinion in *Aatrix* emphatically declares that the inventive concept inquiry “*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.” *Aatrix*, 882 F.3d at 1128 (emphasis added). In other words, the *Aatrix* decision suggests that mere allegations of an inventive con-

cept are sufficient to preclude a finding of subject matter eligibility at the Rule 12(b)(6) stage. Indeed, many of the allegations regarding inventive concept in Aatrix's proposed second amended complaint—such as references from the prior art and the success of the claimed inventions⁴—are wholly divorced from the claims themselves. Nor are the allegations tethered to the application of the abstract idea at issue; the step two inquiry “asks if . . . there is some inventive concept in the application of the abstract idea” described in the claims—i.e., whether some additional steps in the claimed process integrate the

⁴ Aatrix's new allegations in the Second Amended Complaint included the following: the background and development of the inventions of the Aatrix Patents; specific allegations and diagrams spelling out the technology of the Aatrix Patents; the prosecution history of the patents with the relevant USPTO file wrappers attached as exhibits; a large number of prior art references and patentably distinct means and methods of creating, displaying and filling out forms on computers, such as Aatrix's own “monolithic software”; hundreds of search results by the USPTO disclosing prior art in the field; eleven patents or publications disclosing prior art and/or patentably distinct means and methods cited by the USPTO in the prosecution of the applications for the Aatrix's patents; several products for creating, designing, and filling out forms, allegedly distinct from Aatrix's patents, on sale before the date of invention; alternative methods for creating, displaying, and filling out forms such as Superforms and the use of SDK's to launch monolithic software; and the allegedly many improvements, objectives, and advantages over the prior art that the inventions of Aatrix's patents provide, including improvements in the functioning of the computer components of the inventions. J.A. 407–09.

claimed abstract idea into patentable application. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

Similarly, the majority in *Aatrix* contends that “[t]here are concrete allegations in the second amended complaint that individual elements and the claimed combination are not well-understood, routine, or conventional activity.” 882 F.3d at 1128. However, the fact that steps or applications are deemed *not* “routine” or “conventional” does not necessarily result in finding that the subject matter has been rendered eligible under step two. *See SAP Am., Inc. v. Investpic LLC*, No. 17-2081, slip op. at 2 (Fed. Cir. May 15, 2018) (“We may assume [for Rule 12(c) purposes] that the techniques claimed are ‘[g]roundbreaking, innovative, or even brilliant,’ but that is not enough for eligibility.”).

Thus, *Aatrix* removes the inventive concept inquiry from the claims and the specification, and instead places it firmly in the realm of extrinsic evidence. This is a change in our law, and is counter to guidance from the Supreme Court and our own precedent. *See Alice*, 134 S. Ct. at 2357 (“[W]e must examine the elements of the claim to determine whether it contains an ‘inventive concept.’” (emphasis added)); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) (“The § 101 inquiry must focus on the language of the Asserted Claims themselves.”).

The consequences of this decision are staggering and wholly unmoored from our precedent. Unlike prior art for purposes of §§ 102 and 103, we have no established parameters or guidance for what evidence we can and should consider for inventive concept purposes. And although the § 101 inquiry has often been described as a “threshold” issue, capable of early resolution, transforming the predominately legal inquiry into a factual dispute almost guarantees that § 101 will rarely be resolved early

10 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

in the case, and will instead be carried through to trial. Before now, none of our decisions support the proposition that a jury should decide whether a patent includes an inventive concept sufficient to survive *Alice* step two. And given our adoption of *Aatrix* and *Berkheimer*, I see no principled reason that would restrain extending a factual inquiry to step one of *Alice*.

The approach adopted in *Aatrix* also threatens to upset the *Alice* framework by letting the inventive concept inquiry swallow the entirety of step two. Merely identifying an inventive concept is insufficient; the additional elements must also “transform the nature of the claim” into a patent-eligible application.” Instead, by emphasizing whether the claimed elements are “not well-understood, routine, or conventional,” the approach in *Aatrix* reduces the § 101 inquiry into a novelty analysis. This is improper. See *Diamond*, 450 U.S. at 188–91 (“The question . . . of whether a particular invention is novel is *wholly apart* from whether the invention falls into a category of statutory subject matter.” (emphasis added)); *Parker v. Flook*, 437 U.S. 584, 588 (1978) (holding the subject matter eligibility inquiry “does not involve the familiar issues of novelty and obviousness that routinely arise under §§ 102 and 103 when the validity of a patent is challenged”). In the § 101 inquiry, issues of patentability—i.e., novelty and obviousness under §§ 102 and 103—are “of no relevance.” *Diamond*, 450 U.S. at 189. Allegations that a claimed invention is not routine or conventional, without more, cannot wholly replace the § 101 inquiry under *Alice* steps one and two. Although whether the claimed elements or claimed combination are well-understood, routine, or conventional may be disputed, if the inventive concept is not evident in the claims, the court should not be precluded from holding the claims patent ineligible under § 101 at the pleadings stage. If such claimed improvements are absent from the face of the asserted patent, which in this case they are, there is

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 11

no inventive concept sufficient to save an otherwise ineligible patent.

II.

Unlike the novelty and obviousness inquiries under §§ 102 and 103, which necessarily involve factual determinations relating to the scope and content of prior art, the § 101 analysis is analogous to contract interpretation, in which a legal determination is made by reviewing the face of the contract, and additional fact finding is warranted only in some limited circumstances. *See, e.g., Kamfar v. New World Rest. Grp., Inc.*, 347 F. Supp. 2d 38, 48–49 (S.D.N.Y. 2004) (“Under New York law, the initial interpretation of a contract is a matter of law for the court to decide. Where the agreement is unambiguous, a court may not admit extrinsic evidence and interprets the plain language of the agreement as a matter of law.”). A patent is an agreement between the patent owner and the public describing the patent owner’s intellectual property rights.⁵ The terms and conditions of the contract can be analogized to the claims of the patent.

⁵ *See, e.g., Oil States Energy Servs. v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1382 (2018) (Gorsuch, J., dissenting); *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998) (“[T]he patent system represents a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time.”); George Ticknor Curtis, *A Treatise on the Law of Patents for Useful Inventions in the United States Of America* 1 (3d ed. 1867) (“A patent for a useful invention . . . is the grant by the government to the author of a new and useful invention, of the exclusive right, for a term of years, of practicing that invention. The considera-

The fact that the parties disagree on the proper interpretation of the contract does not render the contractual language ambiguous. See *Metro. Life Ins. Co. v. RJR Nabisco, Inc.*, 906 F.2d 884, 889 (2d Cir. 1990) (“Language whose meaning is otherwise plain is not ambiguous merely because the parties urge different interpretations in the litigation.”). Further, a party’s assertion of ambiguity does not require the district court to allow additional opportunities to find or present evidence if the court considers the contract language and the evidence the parties have presented and concludes that the language is reasonably susceptible to only one interpretation. *Skilstaf, Inc. v. CVS Caremark Corp.*, 669 F.3d 1005, 1017–18 (9th Cir. 2012); see also *M & G Polymers USA, LLC v. Tackett*, 135 S. Ct. 926, 938 (2015) (Ginsburg, J., concurring) (“When the intent of the parties is unambiguously expressed in the contract, that expression controls, and the court’s inquiry should proceed no further. But when the contract is ambiguous, a court may consider extrinsic evidence to determine the intentions of the parties.” (citing 11 Richard A. Lord, *Williston on Contracts* §§ 30:2, 30:6, 30:7 (4th ed. 2012))).

Adopting the principles from contract interpretation, a plaintiff’s allegations of inventiveness do not necessarily render the claims of the patent (i.e., contract) “ambigu-

tion . . . is the benefit to society from the invention”); Srividhya Ragavan, *Correlative Obligation in Patent Law: The Role of Public Good in Defining the Limits of Patent Exclusivity*, 6 N.Y.U. J. Intell. P. & Ent. L. 47, 53 (“The grant of monopoly rights is a contract with the government in exchange for the patent holder providing a benefit to society. . . . The contract necessarily balances granted rights with imposed corresponding obligations of the patent owner.”).

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 13

ous” to justify considering evidence outside of the patent. The factual allegations of the inventiveness of the claimed invention do not have to be accepted by the court if the claims of the asserted patent do not reflect the alleged innovative concepts and transform the nature of the claim into a patent-eligible abstract idea. *See, e.g., Ariosa*, 788 F.3d at 1379 (“Sequenom argues that ‘before the ’540 patent, *no one* was using the plasma or serum of pregnant mothers to amplify and detect paternally-inherited cffDNA.’ This argument implies that the inventive concept lies in the discovery of cffDNA in plasma or serum. Even if so, this is not the invention claimed by the ’540 patent.” (citation omitted)).

The § 101 inquiry can similarly be analogized to claim construction. 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. The Supreme Court has said as much:

We recognize that a district court’s construction of a patent claim, like a district court’s interpretation of a written instrument, often requires the judge only to examine and to construe the document’s words without requiring the judge to resolve any underlying factual disputes. As all parties agree, when the district court reviews only evidence intrinsic to the patent (the patent claims and specifications, along with the patent’s prosecution history), the *judge’s determination will amount solely to a determination of law*, and the Court of Appeals will review that construction *de novo*.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 840–41 (2015) (emphasis added).

A § 101 patent eligibility determination can be resolved without the need to look beyond the four corners of

14 AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC.

the patent. Thus, the analysis becomes solely a question of law for the court to properly decide. This does not mean that there will never be factual allegations that would preclude dismissal for ineligible subject matter, but consistent with our precedent, such a determination can be made based solely on the claims and written description. See, e.g., *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016) (refusing to engage in fact finding in the § 101 inquiry when the specification sufficiently described the claimed functions); see also *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1346 (Fed. Cir. 2015) (en banc) (“Regarding questions of claim construction . . . the district court’s determinations based on evidence intrinsic to the patent as well as its ultimate interpretations of the patent claims are legal questions that we review de novo.”). In fact, “[i]n many cases . . . evaluation of a patent claim’s subject matter eligibility under § 101 can proceed even before a formal claim construction.” *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1374 (Fed. Cir. 2016); see also *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1273 (Fed. Cir. 2012) (“[C]laim construction is not an inviolable prerequisite to a validity determination under § 101.”)

Accordingly, just as in claim construction and contract interpretation, looking beyond the four corners of the patent should only occur in exceptional circumstances. A factual allegation or dispute should not automatically take the determination out of the court’s hands; rather, there needs to be justification for why additional evidence must be considered—the default being a legal determination.

Whether a § 101 analysis is more akin to §§ 102 or 103 analysis—i.e., predominately factual—or contract interpretation and claim construction—i.e., predominately legal—is significant, for example, in the context of a Rule 12(b)(6) motion because these legal determinations can be

AATRIX SOFTWARE, INC. v. GREEN SHADES SOFTWARE, INC. 15

decided at an early stage of the case rather than having to proceed to summary judgment or trial. *See OIP Techs.*, 788 F.3d at 1364–65 (Mayer, J., concurring) (“Addressing 35 U.S.C. § 101 at the outset not only conserves scarce judicial resources and spares litigants the staggering costs associated with discovery and protracted claim construction litigation, it also works to stem the tide of vexatious suits brought by the owners of vague and overbroad business method patents. Accordingly, where, as here, asserted claims are plainly directed to a patent ineligible abstract idea, we have repeatedly sanctioned a district court’s decision to dispose of them on the pleadings.”).

III.

The court’s inaction today has prevented us from exploring the important question raised in the *en banc* petitions. The *en banc* process is intended to offer careful, in-depth study by the full court of exceptionally important questions, with the benefit of briefing and argument by the parties, involvement of amici, and hearing the government’s views. I dissent from the court’s vote to reject this benefit, in particular where the *Aatrix* and *Berkheimer* decisions upset established precedent and offer no guidance to the many questions they raise.