No. 23-2437

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

RECENTIVE ANALYTICS, INC.,

Plaintiff-Appellant,

v.

FOX CORPORATION; FOX BROADCASTING COMPANY, LLC; AND FOX SPORTS PRODUCTIONS, LLC,

Defendants-Appellees.

Appeal from the United States District Court for the District of Delaware
The Honorable Gregory B. Williams, Case No. 1:22-cv-01545-GBW

RECENTIVE ANALYTICS, INC.'S CORRECTED COMBINED PETITION FOR PANEL REHEARING AND REHEARING EN BANC

Alexandra D. Valenti
GOODWIN PROCTER LLP
The New York Times Building
620 Eighth Avenue
New York, NY 10018
Tel.: 212.813.8800
Fax.: 212.202.4038

Robert Frederickson III
Jesse Lempel
GOODWIN PROCTER LLP
100 Northern Ave.
Boston, MA 02210
Tel.: 617.570.1000
Fax.: 617.523.1231

June 20, 2025

Counsel for Plaintiff-Appellant Recentive Analytics, Inc.

CERTIFICATE OF INTEREST

Counsel for Recentive Analytics, Inc. ("Recentive"), certifies the following:

1. **Represented Entities.** Provide the full names of all entities represented by undersigned counsel in this case. Fed. Cir. R. 47.4(a)(1).

   Recentive Analytics, Inc.

2. **Real Party in Interest.** Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. Fed. Cir. R. 47.4(a)(2).

   Not applicable

3. **Parent Corporations and Stockholders.** Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. Fed. Cir. R. 47.4(a)(3).

   Not applicable

4. **Legal Representatives.** List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

   Shaw Keller LLP; John W. Shaw; Alison Siedor; Karen Elizabeth Keller; Nathan Roger Hoeschen

5. **Related Cases.** Provide the case titles and numbers of any case known to be pending in this court or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. Do not include the originating case number(s) for this case. Fed. Cir. R. 47.4(a)(5).

   None

6. **Organizational Victims and Bankruptcy Cases.** Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

   Not applicable

Dated: June 18, 2025

/s/ *Robert Frederickson III*
Robert Frederickson III

Counsel for Plaintiff-Appellant

TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES

Cases **Page(s)**

Other Authorities

GLOSSARY

Abbreviation	**Description**
’367 patent	U.S. Patent No. 11,386,367
’960 patent	U.S. Patent No. 11,537,960
’811 patent	U.S. Patent No. 10,911,811
’957 patent	U.S. Patent No. 10,958,957
Machine Learning Training Patents	The ’367 patent and ’960 patent, collectively
Network Map Patents	The ’811 patent and ’957 patent, collectively
Fox	Fox Corporation, Fox Broadcasting Company, LLC, and Fox Sports Productions, LLC, collectively
ML	Machine learning
PTO	United States Patent and Trademark Office
Recentive	Recentive Analytics, Inc.

RULE 40(c) STATEMENT

1. **Based on my professional judgment, I believe the panel decision is contrary to the following decisions of the Supreme Court of the United States and of this Court:**

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

   CardioNet, LLC v. InfoBionic, Inc., 955 F.3d 1358 (Fed. Cir. 2020)

   Koninklijke KPN N.V. v. Gemalto M2M GmbH, 942 F.3d 1143 (Fed. Cir. 2019)

   Data Engine Techs. LLC v. Google LLC, 906 F.3d 999 (Fed. Cir. 2018)

2. **Based on my professional judgment, I believe this appeal requires an answer to precedent-setting questions of exceptional importance:**

This case presents two exceptionally important questions in the Court's first subject-matter eligibility decision in the burgeoning field of artificial intelligence and machine learning. First, the panel held, at *Alice* step 1, that "claims that do no more than apply established methods of machine learning to a new data environment" are patent ineligible, unless they also "disclos[e] improvements to the machine learning models to be applied." Op.10, 18. By requiring any machine learning invention to claim both (1) new applications of machine learning and (2) machine learning models unknown in the prior art, the panel confuses patent eligible subject matter with the distinct requirements of novelty and nonobviousness—doing precisely what the Supreme Court and this Court have repeatedly warned against. That conflict with binding precedent warrants panel rehearing or rehearing en banc, especially given the extraordinary and far-reaching impacts on one of the most

consequential and rapidly evolving fields of technical innovation.

Second, en banc review is independently warranted because the panel's holding that "the claims do not delineate steps through which the machine learning technology achieves an improvement," Op.13, effectively converts the § 101 inquiry into an enablement requirement that properly belongs to § 112. Several Judges of this Court have called for en banc review of this issue, and this case presents an excellent opportunity to do so.

Dated: June 20, 2025

/s/ *Robert Frederickson III*
Robert Frederickson III

Counsel for Plaintiff-Appellant

INTRODUCTION

This case asks whether new applications of highly-specialized machine learning models are eligible for patent protection, an issue of profound importance. Machine learning is on the precipice of reshaping every sector of industry, and it is evolving by the month. In one fell swoop, the panel decision eliminates patent protection for new machine learning applications that can be labeled (at the pleading stage) as using "established" models. This sweeping denial of patentability directly conflicts with Supreme Court and Federal Circuit precedent and will chill innovation in one of the most transformative fields of technical development. The stakes could not be higher. We are a long way from unlocking the full potential of even "established" machine learning models. And machine learning innovation is driven by the search for new uses of these models—from the discovery of new drugs to cutting edge cybersecurity techniques. That is, at least until the panel's decision holding new applications of these models *per se* patent ineligible. En banc review would allow the full court to consider this exceptionally important issue informed by industry stakeholders and the government.

Both the Supreme Court and this Court have drawn a line between patent eligible subject matter (§ 101) and novelty and nonobviousness (§§ 102 and 103). The panel decision erases that line. In its precedential opinion, the panel holds that *all* patents claiming concrete (and novel) applications of machine learning are

ineligible under § 101 so long as the underlying machine learning models are already "established," *i.e.*, known in the prior art. Op.10. The panel thus transforms subject-matter eligibility into a prior art test: the only way to satisfy § 101 is by "disclosing improvements to the machine learning models to be applied." Op.18. That holding collapses § 101 into the novelty and nonobviousness inquiries of §§ 102 and 103, directly conflicting with precedents of this Court and the Supreme Court.

This case warrants rehearing en banc for an independent reason. The panel decision blends subject-matter under § 101 with enablement under § 112 in holding that § 101 is not satisfied because "the claims do not delineate steps through which the machine learning technology achieves an improvement." Op.12-13.

This Court has "struggled to consistently apply the judicially created exceptions to [§ 101], slowly creating a panel-dependent body of law and destroying the ability of American businesses to invest with predictability." *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 977 F.3d 1379, 1382 (Fed. Cir. 2020) (Moore, J., concurring). The panel decision pushes § 101 jurisprudence to its breaking point, while threatening the ability of businesses to reliably invest in the world-changing technology of machine learning. Several Judges of this Court have urged the full Court to review the boundary between eligibility and the separate requirements of §§ 102, 103, and 112. This case presents an excellent vehicle to do so. The Court should grant this petition.

BACKGROUND

I. The Asserted Patents.

Recentive's patents recite methods of using machine learning "to solve problems confronting the entertainment industry and television broadcasters: how to optimize the scheduling of live events and how to optimize 'network maps,' which determine the programs or content displayed by a broadcaster's channels within certain geographic markets at particular times." Op.2.

Before Recentive, broadcasters relied on "crude and suboptimal generalizations about viewers' preferences within a given region." Appx43-44(¶23). The Recentive patents sought to solve that problem by employing a specific machine learning method to create dynamic, intelligent network maps. Critically, the Recentive patents do not claim merely the resulting "dynamic" or "optimized" network map. Rather, the Recentive method recites *how* to build and deploy them through the concrete process of "iteratively train[ing]" a specific machine learning model using specified parameters to "find useful patterns" across vast amounts of information relevant to network maps and event schedules. Appx41-42(¶¶18, 22).

The "Machine Learning Training Patents,"[1] for example, claim using machine learning to identify relationships between "event parameters" (e.g., location) and "event target features" (e.g., profit.). To do so, the claims *recite* "iteratively training

[1] U.S. Patent Nos. 11,386,367 and 11,537,960.

the ML model … using historic data corresponding to one or more previous series of live events." The claims further *recite* that the ML model is either "a neural network ML model" or "a support vector ML model." After the iterative training step, the ML model is deployed. The claims *recite* that a user identifies "event parameters" of interest for future events and assigns weights to the "target features." Those user-inputs are fed to the already-trained ML model, which is able to predict the best schedule for the future events, optimized relative to the target features—*i.e.*, "*via the trained ML model*." Op.3 n.2 (emphasis added). Because of the sophistication of ML models, the patents claim updating the predictions when changes in event parameters (such as ticket prices) are detected. *Id.* By building and deploying trained ML models, the schedules are materially improved and can be dynamically updated in ways no prior art method could have achieved. Appx38,41-44.

In short, Recentive's patents claim (i) how to build a specifically-trained machine learning model, (ii) the specific ML model type, (iii) the data needed for training, (iv) how to use the newly-created model after training, and (iv) the benefit that flows from using the claimed machine learning methods over conventional techniques.

II. The Panel's Decision.

Recentive filed this suit in 2022. Fox moved to dismiss, arguing that

Recentive's patents are ineligible under § 101. The district court granted the motion, concluding that Recentive's patents "are directed to the abstract ideas of producing network maps and event schedules … using known generic mathematical techniques." Appx16. The district court's reasoning rested on the nature of machine learning itself. "The relevant question," the court stated, "is whether the machine learning processes are mathematical algorithms." Appx18. The district court found the answer to that question dispositive: "Because machine learning is algorithmic in nature, the Court finds that the patents-in-suit are directed to an abstract idea." *Id.* The district court then concluded that there is no inventive concept at *Alice* step two. Appx25.

The panel affirmed. Importantly, though, the panel did not adopt the district court's reasoning that "machine learning is algorithmic in nature" and therefore inherently patent-ineligible. For good reason: Recentive's patents claim *specific methods of applying* machine learning, not the algorithms themselves. *See Parker v. Flook*, 437 U.S. 584, 590 (1978) ("[A] process is not unpatentable simply because it contains … a mathematical algorithm.").

Instead, the panel reasoned that Recentive's patents are directed to an abstract idea because they "do no more than apply *established* methods of machine learning to a new data environment." Op.10 (emphasis added). The panel contended that Recentive's "patents rely on the use of generic machine learning technology in

carrying out the claimed methods for generating event schedules and network maps," and noted that "Recentive … admits that the patents do not claim a specific method for 'improving the mathematical algorithm or making machine learning better.'" Op.11-12. Because it viewed the machine learning models to be "generic," the panel concluded that the claimed methods of using those models are ineligible under § 101. The panel did not stop there. In the first ever § 101 decision of this Court in the field of machine learning and artificial intelligence, the panel extended its holding to wipe out patent protection for *every* patent that claims a new way of applying machine learning. Op.18.

The panel acknowledged that "[m]achine learning is a burgeoning and increasingly important field." *Id*. It never explained, however, how this technology can be both "burgeoning" and "generic." Similarly, the panel recognized that Recentive's patents "introduce machine learning techniques to the fields of event planning and creating network maps." Op.15. But it did not explain what made those techniques abstract, other than that they "exist[ed]." Op.14. From there—on a Rule 12(b)(6) record—the panel extended its holding to declare that *all* machine learning inventions are patent ineligible unless they "disclos[e] improvements to the machine learning models" themselves (Op.18) before even getting to the statutory requirements for patentability (*i.e.*, §§ 102, 103, and 112).

ARGUMENT

I. The Panel Decision Erases the Line Between § 101 and §§ 102/103.

A. The § 101 inquiry is not a prior art search.

"The § 101 patent-eligibility inquiry is only a threshold test"; an invention must also satisfy other patentability requirements, including "that the invention be novel, see § 102, nonobvious, see § 103, and fully and particularly described, see § 112." *Bilski v. Kappos*, 561 U.S. 593, 602 (2010). The Supreme Court has held that these distinct requirements should not be conflated. "The 'novelty' of any element or steps in a process, or even of the process itself, is of *no relevance* in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter." *Diamond v. Diehr*, 450 U.S. 175, 188-89 (1981) (emphasis added). Even if a "process is not deserving of patent protection because it fails to satisfy the statutory conditions of novelty under § 102 or nonobviousness under § 103," the Supreme Court held, "[a] rejection on either of these grounds does not affect the determination that [the] claims recited subject matter … eligible for patent protection under § 101." *Id.* at 191.

This Court, too, has repeatedly held that "the *Alice* inquiry is not a prior art search." *Broadband iTV, Inc. v. Amazon.com, Inc.*, 113 F.4th 1359, 1367 (Fed. Cir. 2024); *see CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1372-73 (Fed. Cir. 2020) (courts "reserve for §§ 102 and 103 purposes our comparison of the prior art and the claims to determine if the claims are, in fact, an improvement over the prior

art"); *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011 (Fed. Cir. 2018) ("The eligibility question is not whether anyone has ever used tabs to organize information. That question is reserved for §§ 102 and 103."). In *CardioNet*, this Court rejected the attempt to conflate eligibility with novelty and nonobviousness. The Court explained that "[t]he analysis under *Alice* step one is whether the claims as a whole are 'directed to' an abstract idea, regardless of whether the prior art demonstrates that the idea or other aspects of the claim are known, unknown, conventional, unconventional, routine, or not routine." 955 F.3d at 1372.[2]

B. The panel decision holds that *no* application of machine learning models that existed in the prior art is patent eligible.

The panel decision conflicts with the precedents above by holding, at *Alice* step one, that "claims that do no more than apply established methods of machine learning to a new data environment" are patent ineligible under § 101. Op.10. Crucially, the panel did *not* hold that these "established methods of machine learning" are themselves an abstract idea. They are not. Nor did the panel hold that these established methods of machine learning are "a longstanding or fundamental human practice," *Broadband iTV*, 113 F.4th at 1367, which they decidedly are not.

[2] In partial dissent, Judge Dyk "agree[d] that the § 101 inquiry is different from § 102/103 analysis." *CardioNet*, 955 F.3d at 1375 (Dyk, J., dissenting in part). While insisting that prior art must be considered in "making the determination that practices are longstanding in the section 101 step one analysis," Judge Dyk nevertheless acknowledged that "the mere fact that a prior art reference discloses an idea does not make it longstanding." *Id.* at 1375-77.

If anything, new applications of machine learning—like Recentive's patents—are *disrupting* longstanding and fundamental human practices because they approach and solve problems differently than the human mind. *See* Appx48(¶29); Appx53(¶34).

Rather, the panel's reasoning rests solely on the ground that Recentive's patents claim applications of "established methods of machine learning"—*i.e.*, models existing in the prior art—"without disclosing improvements to the machine learning models to be applied." Op.10, 18. In effect, the panel disqualified the patents for failing to claim *new* or *improved* machine learning models themselves. But even assuming that the underlying ML models claimed in Recentive's patents were already "established," the panel never explains why that fact makes the claimed process of *using* those models abstract. It does not. A non-abstract process does not *become* abstract simply because someone described or used the same process before. In *Diehr*, for example, the Supreme Court held that a computer-assisted process for curing synthetic rubber was not abstract under § 101, regardless of whether it was known in the prior art. 450 U.S. at 191-93. Timing has no impact on that determination: if an applicant sought to patent that same rubber-curing process today, it would still claim eligible subject matter under *Diehr,* even if it would fail the novelty and/or nonobviousness requirements. In holding that, in the context of ML-based inventions, § 101 requires machine learning models *not established* in the

prior art, the panel obliterates the line dividing eligibility from novelty and nonobviousness.

To be sure, at *Alice* step two, the "inventive concept" requirement means that "the § 101 patent-eligibility inquiry and, say, the § 102 novelty inquiry might sometimes overlap." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72-73, 90 (2012); *see Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, 927 F.3d 1333, 1347 (Fed. Cir. 2019) (Chen, J., concurring with the denial of the petition for rehearing en banc) (discussing *Mayo*'s "novelty/inventive concept reasoning" at *step two* of the § 101 inquiry, not step one). Because of that overlap *at step two*, the United States has critiqued courts for "conflat[ing]" § 101 with §§ 102/103. U.S. Br. at 17, *Interactive Wearables v. Polar Electro Oy*, No. 21-1281 (U.S. Apr. 5, 2023); *see id.* (criticizing the "heavy emphasis on prior art" as part of the "step-two analysis"). But the panel decision goes much further, collapsing § 101 into §§ 102/103 by injecting a prior art test into *step one* of the *Alice* inquiry.

Until the panel decision, this Court had never suggested that *Alice* step one requires a patent to claim both (1) a new application of an established process *and* (2) an improvement to the technology used in that process. Indeed, the panel incorrectly asserts that this Court previously "held the application of existing technology to a novel database does not create patent eligibility." Op.14. The cases it relies upon, though, stand for a far more modest proposition: that an *otherwise*

abstract idea remains abstract even when "limited to particular content or a particular source." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) (quotation marks and citation omitted). That is uncontroversial, because "limiting the use of an abstract idea to a particular technological environment" is "not enough for patent eligibility." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 223 (2014) (quotation marks and citation omitted). But a *non*-abstract process—here the non-abstract selection, training, and application of a particular machine learning model—does not become abstract simply because the underlying models "exist[ed]" before. Op.14.

The fundamental problem with the claims in *SAP* was that they were directed toward "improved mathematical analysis," 898 F.3d at 1168, which is arguably the very thing the panel faults the Recentive patents for *not* claiming. *SAP* did *not* hold that "the application of existing technology to a novel database does not create patent eligibility." Op.14. Rather, the Court only discussed the claimed "databases" in *SAP* in its *step two* analysis, which it characterized as "off-the-shelf computer technology." 898 F.3d at 1168-70. There is nothing "off-the-shelf" about the machine learning models claimed in Recentive's patents. At a minimum, there was no basis for the panel to write off the entire, highly-specialized field of machine learning as "conventional" or "generic" (Op.11-12) on a Rule 12(b)(6) standard in the first case on the issue simply because the underlying models "exist[ed]."

The panel decision thus erases the line between § 101 and §§ 102 and 103. Under the panel's rule, no method of applying machine learning is patent-eligible if the underlying models are already "established" in the prior art. To pass muster under this new rule, a patent must "disclos[e] improvements to the machine learning models to be applied." Op.18. That cannot be reconciled with the precedents of this Court or the Supreme Court.

C. The asserted claims are patent eligible under the correct § 101 inquiry.

Unlike other difficult aspects of § 101 jurisprudence, the panel's holding does *not* stem from the Supreme Court's § 101 precedents. *Cf. Athena Diagnostics*, 927 F.3d at 1337 (Hughes, J., concurring in the denial of the petition for rehearing en banc) ("[T]his is not a problem that we can solve."). This Court's precedents already hold that *Alice* step one is not a prior art search. *See* pp. 7-8, *supra*. And those cases supply the proper § 101 inquiry that the panel should have applied: whether Recentive's claims "focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016).

Under that inquiry, the outcome is clear: Recentive's "claims recite a sufficiently specific implementation … of an existing tool … that improves the functioning of the overall technological process of" generating network maps and

event schedules. *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1151 (Fed. Cir. 2019). Recentive's "claims do not simply recite, without more, the mere desired result …, but rather recite a specific solution for accomplishing that goal." *Id*. The Recentive claims recite concrete steps to build machine learning models that can be deployed to generate optimized network maps and event schedules. *See* pp. 3-4, *supra*.

Fundamentally, the point at which emerging and rapidly-growing technologies like machine learning become so "conventional" that new applications of them are not patentable is a question of novelty and nonobviousness, not eligibility.

II. The Panel Decision Also Imports § 112's Enablement Requirement into § 101.

The panel decision suffers from another flaw that independently warrants en banc review: its holding that "the claims do not delineate steps through which the machine learning technology achieves an improvement," Op.12-13, effectively imports the enablement requirement of § 112 into § 101.

The panel's "blended 101/112 analysis," as Chief Judge Moore has observed, amounts to "enablement on steroids." *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1305 (Fed. Cir. 2020) (Moore, J., dissenting). And numerous Judges of this Court have voted to take this issue en banc, given that "en banc review would provide an opportunity for the parties and other stakeholders to address, and

the full court to consider, where eligibility analysis stops and enablement analysis begins." *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 966 F.3d 1347, 1363 (Fed. Cir. 2019) (Stoll, J., dissenting from the denial of the petition for rehearing en banc). This case presents an excellent opportunity to do so.

III. The Panel Decision Will Stifle Investment in World-Changing Machine Learning Inventions.

The panel's acknowledgement that "[m]achine learning is a burgeoning and increasingly important field" (Op.18) is an understatement to say the least. Machine learning is rapidly evolving and, by all accounts, will dramatically reshape almost every aspect of our society. The pharmaceutical, banking, healthcare, retail, manufacturing, media, and transportation industries increasingly rely on machine learning to drive innovation, improve efficiency, secure market positions, and achieve growth. Suffice to say, the entire world is looking for new *applications* of existing machine learning models.

The number of AI-related patent applications surpassed 340,000 by 2023, more than 60% of which focus on machine learning or deep learning inventions. *See* Bao Tran, *The Rise of Generative AI Patents: Stats on LLM & AI Model Innovations* (June 14, 2025), https://patentpc.com/blog/the-rise-of-generative-ai-patents-stats-on-llm-ai-model-innovations. If such novel applications of machine learning technology cannot be protected, important innovation—often emerging from startups backed by venture capital—will be unable to attract investment from firms

counting on a reliable patent-protection regime. *See* David O. Taylor, *Patent Eligibility and Investment*, 41 Cardozo L. Rev. 2019, 2059, 2076 (2020) (finding "in the software and Internet industry, 72% of investors rank patent eligibility as important to their firms' investment decisionmaking" and "the more an investor knows about [patent-]eligibility law, the less likely that investor will report shifting investments into the … software and Internet industries."); Stuart J. H. Graham & Ted Sichelman, *Why Do Start-Ups Patent?*, 23 Berkeley Tech. L.J. 1063, 1078 (2008) (concluding "increased patenting by venture-backed companies in the software and biotech industries is significantly correlated with total investment, total number of financing rounds, and firm longevity."). Against this backdrop, the debilitating effect of the panel's decision on the "burgeoning and increasingly important field" of machine learning, Op.18, is predictable.

The harm caused by stripping away patent protection is irrefutable. A former PTO director testified that uncertainty regarding patent eligibility has "stymied research and development, investment, and innovation, and has hurt competition and the U.S. economy," including for "cutting-edge technologies like ... artificial intelligence." Andrei Iancu, *The Patent Eligibility Restoration Act: Hearings on S. 2140 Before the Subcomm. on Intell. Property*, 118th Cong. 10, 13 (Jan. 23, 2024), https://www.judiciary.senate.gov/imo/media/doc/2024-01-23_-_testimony_-_iancu.pdf. Likewise, a cadre of bipartisan Senators have lamented that patent

eligibility law is "unclear, unreliable, and unpredictable, resulting in U.S. inventors being unable to obtain patents in areas where our economic peers offer patent protection," and so "[c]ritical technologies like … artificial intelligence can be protected with patents in Europe and China, but not in the United States." *Tillis, Coons, Kiley, and Peters Reintroduce Landmark Legislation to Restore American Innovation* (May 1, 2025), https://www.tillis.senate.gov/2025/5/tillis-coons-kiley-and-peters-reintroduce-landmark-legislation-to-restore-american-innovation; *Tillis, Coons Introduce Landmark Legislation to Restore American Innovation* (June 22, 2023), https://www.tillis.senate.gov/2023/6/tillis-coons-introduce-landmark-legislation-to-restore-american-innovation; *see also* Nat'l Science Bd., *Global Competitors Outpace U.S. in Patents* (Feb. 29, 2024), https://www.nsf.gov/nsb/news/news_summ.jsp?cntn_id=309184 ("In 2022, about 40,000 AI patents were granted to inventors with addresses from China; the comparable figure for the United States was about 9,000," "with "China's AI patents primarily granted in machine learning.").

The impact of the panel decision is already making waves through the courts, with defendants "seizing on the [panel's] decision in their bid to shake allegations of infringement—even where those same allegations center on patent claims that purport to improve upon machine learning." Melissa Ritti, *Limits of Federal Circuit's AI patent eligibility ruling put to test in US courts*, MLex (May 29, 2025),

https://perma.cc/FPT2-Y74W. "[A] huge uptick in patent eligibility rejections in the AI space" has been reported, "a trend ... [that] will continue in the wake of *Recentive*." *Id*. The PTO had also undertaken a substantial effort to analyze artificial intelligence and machine learning inventions before the panel's decision—including "actively engag[ing] with [its] stakeholders" and receiving "extensive input from the public on subject matter eligibility and AI … to promote clarity, consistency, and address innovation in AI and critical and emerging technologies." PTO, *2024 Guidance Update on Patent Subject Matter Eligibility, Including on Artificial Intelligence*, 89 Fed. Reg. 58,128, 58,130 (July 17, 2024). The panel decision frustrates that collaborative effort and the crucial innovation that the PTO and stakeholders sought to protect.

CONCLUSION

The Court should grant this petition for panel rehearing or rehearing en banc to reestablish the dividing line between subject-matter eligibility and novelty/nonobviousness and enablement. The future of artificial intelligence and machine learning patent protection in the United States is counting on it.

/s/ Robert Frederickson III
Robert Frederickson III
Jesse Lempel
GOODWIN PROCTER LLP
100 Northern Ave.
Boston, MA 02210
Tel.: 617.570.1000
Fax.: 617.523.1231
RFrederickson@goodwinlaw.com

Alexandra D. Valenti
GOODWIN PROCTER LLP
The New York Times Building
620 Eighth Avenue
New York, NY 10018
Tel.: 212.813.8800
Fax.: 212.202.4038

June 20, 2025

Counsel for Plaintiff-Appellant
Recentive Analytics, Inc.

CERTIFICATE OF COMPLIANCE

This petition complies with the type-volume limitations of Federal Rule of Appellate Procedure 40(b)(3)(A) because it contains 3,888 words, excluding the parts of the motion exempted by Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b)(2).

This petition complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6). The motion has been prepared in a proportionally spaced typeface using Microsoft Word 365 in 14-point Times New Roman font.

June 20, 2025

/s/ *Robert Frederickson III*
Robert Frederickson III

CERTIFICATE OF SERVICE

I hereby certify that on June 20, 2025, I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit using the Court's CM/ECF system. Counsel for all parties to the case are registered CM/ECF users and will be served by the CM/ECF system.

/s/ *Robert Frederickson III*
Robert Frederickson III

ADDENDUM

ADDENDUM INDEX

Tab No.	Document Description
1	*Recentive Analytics, Inc. v. Fox Corp, et al*, 134 F.4th 1205 (Fed. Cir. 2025)

TAB 1

United States Court of Appeals for the Federal Circuit

RECENTIVE ANALYTICS, INC.,
Plaintiff-Appellant

v.

FOX CORP., FOX BROADCASTING COMPANY, LLC, FOX SPORTS PRODUCTIONS, LLC,
Defendants-Appellees

2023-2437

Appeal from the United States District Court for the District of Delaware in No. 1:22-cv-01545-GBW, Judge Gregory Brian Williams.

Decided: April 18, 2025

ROBERT FREDERICKSON, III, Goodwin Procter LLP, Boston, MA, argued for plaintiff-appellant. Also represented by JESSE LEMPEL; ALEXANDRA D. VALENTI, New York, NY.

RANJINI ACHARYA, Pillsbury Winthrop Shaw Pittman LLP, Palo Alto, CA, argued for defendants-appellees. Also represented by MICHAEL ZELIGER; EVAN FINKEL, MICHAEL SHIGEYORI HORIKAWA, Los Angeles, CA.

Before DYK, and PROST, *Circuit Judges*, and GOLDBERG, *Chief District Judge*.[1]

DYK, *Circuit Judge*.

This case presents the question of patent eligibility of four patents directed to the use of machine learning. The patents claim the use of machine learning for the generation of network maps and schedules for television broadcasts and live events.

Appellant Recentive Analytics, Inc. ("Recentive"), the owner of the patents, sued appellees Fox Corp., Fox Broadcasting Company, LLC, and Fox Sports Productions, LLC (collectively, "Fox") for infringement. The district court dismissed, concluding that the patents were directed to ineligible subject matter under 35 U.S.C. § 101. We affirm because the patents are directed to the abstract idea of using a generic machine learning technique in a particular environment, with no inventive concept.

BACKGROUND

I

Recentive is the owner of U.S. Patent Nos. 10,911,811 ("'811 patent"), 10,958,957 ("'957 patent"), 11,386,367 ("'367 patent"), and 11,537,960 ("'960 patent"). The patents purport to solve problems confronting the entertainment industry and television broadcasters: how to optimize the scheduling of live events and how to optimize "network maps," which determine the programs or content displayed by a broadcaster's channels within certain geographic markets at particular times. The patents fall

---

[1] Honorable Mitchell S. Goldberg, Chief District Judge, United States District Court for the Eastern District of Pennsylvania, sitting by designation.

into two groups that the parties refer to as the "Machine Learning Training" patents and the "Network Map" patents.

A. The Machine Learning Training Patents

The '367 and '960 patents are the "Machine Learning Training" patents. Both are titled "Systems and Methods for Determining Event Schedules." They share a specification and concern the scheduling of live events. Claim 1 of the '367 patent is representative of the Machine Learning Training patents and recites a method containing: (i) a collecting step (receiving event parameters and target features); (ii) an iterative training step for the machine learning model (identifying relationships within the data); (iii) an output step (generating an optimized schedule); and (iv) an updating step (detecting changes to the data inputs and iteratively generating new, further optimized schedules).[2]

---

[2] Claim 1 of the '367 patent recites:

A computer-implemented method of dynamically generating an event schedule, the method comprising:

receiving one or more event parameters for series of live events, wherein the one or more event parameters comprise at least one of venue availability, venue locations, proposed ticket prices, performer fees, venue fees, scheduled performances by one or more performers, or any combination thereof;

receiving one or more event target features associated with the series of live events, wherein the one or more event target features comprise at least one of event attendance, event profit, event revenue, event expenses, or any combination thereof;

providing the one or more event parameters and the one or more target features to a machine learning

(ML) model, wherein the ML model is at least one of a neural network ML model and a support vector ML model;

iteratively training the ML model to identify relationships between different event parameters and the one or more event target features using historical data corresponding to one or more previous series of live events, wherein such iterative training improves the accuracy of the ML model;

receiving, from a user, one or more user-specific event parameters for a future series of live events to be held in a plurality of geographic regions;

receiving, from the user, one or more user-specific event weights representing one or more prioritized event target features associated with the future series of live events;

providing the one or more user-specific event parameters and the one or more user-specific event weights to the trained ML model;

generating, via the trained ML model, a schedule for the future series of live events that is optimized relative to the one or more prioritized event target features;

detecting a real-time change to the one or more user-specific event parameters;

providing the real-time change to the trained ML model to improve the accuracy of the trained ML model; and

updating, via the trained ML model, the schedule for the future series of live events such that the schedule remains optimized relative to the one or more prioritized event target features in view of the real-time change to the one or more user-specific event parameters.

'367 patent, col. 14 ll. 2–49.

The specification teaches that the machine learning model may be "trained using a set of training data," which can include "historical data from previous live events or series of live events." *Id.* col. 6 ll. 5–8. That historical data may include prior event dates, venue locations, and ticket sales. *Id.* col. 6 ll. 6–11. In operating the machine learning model, users enter "target features," which are a user's selected results, such as maximizing event attendance, revenue, or ticket sales. *Id.* col. 6 ll. 12–15. The machine learning model may "be trained to recognize how to optimize, maximize, or minimize one or more of the target features based on a given set of input parameters." *Id.* Eventually, the machine learning model will "generate the optimized schedule[] and provide the schedule . . . as output." *Id.* col. 6 ll. 16–17.

The specification also makes clear that the patented method employs "any suitable machine learning technique[,] . . . such as, for example: a gradient boosted random forest, a regression, a neural network, a decision tree, a support vector machine, a Bayesian network, [or] other type of technique." *Id.* col. 6 ll. 1–5. The schedules are generated "dynamically, in response to real-time changes in data," allowing "input parameters and target features [to] be processed and considered more efficiently and accurately[] compared to prior approaches." *Id.* col. 9 ll. 20–25.

B. The Network Map Patents

The '811 and '957 patents are the Network Map patents. Both are titled "Systems and Methods for Automatically and Dynamically Generating a Network Map." They share a specification and concern the creation of network maps for broadcasters. Claim 1 of the '811 patent is representative of the Network Map patents and recites a method containing: (i) a collecting step (receiving current broadcasting schedules); (ii) an analyzing step (creating a network map); (iii) an updating step

(incorporating real-time changes to the data inputs); and (iv) a using step (determining program broadcasts using the optimized network map).[3]

---

[3] Claim 1 of the '811 patent recites:

A computer-implemented method for dynamically generating a network map, the method comprising:

receiving a schedule for a first plurality of live events scheduled to start at a first time and a second plurality of live events scheduled to start at a second time;

generating, based on the schedule, a network map mapping the first plurality of live events and the second plurality of live events to a plurality of television stations for a plurality of cities,

wherein each station from the plurality of stations corresponds to a respective city from the plurality of cities,

wherein the network map identifies for each station (i) a first live event from the first plurality of live events that will be displayed at the first time, and (ii) a second live event from the second plurality of live events that will be displayed at the second time, and

wherein generating the network map comprises using a machine learning technique to optimize an overall television rating across the first plurality of live events and the second plurality of live events;

automatically updating the network map on demand and in real time based on a change to at least one of (i) the schedule and (ii) underlying criteria;

wherein updating the network map comprises updating the mapping of the first plurality of live events and the second plurality of live events to the plurality of television stations; and

The Network Map patents use training data in conjunction with a machine learning model to generate optimized network maps. The training data may include "weather data, news data, and/or gambling data," but is not limited to such categories. *Id.* col. 3 ll. 26–30. In operating the machine learning model, users may input target features to achieve a selected result. For example, in the context of National Football League broadcasts, users may select a target feature that maximizes "overall ratings for the NFL across all games, ratings for the NFL with a particular affiliate (CBS or FOX), ratings for the NFL in a particular market, with a particular audience, or at a particular time." *Id.* col. 3 ll. 12–15. The specification clarifies that the disclosed method uses generic computing equipment in conjunction with "any suitable machine learning technique." *Id.* col. 3 ll. 22–26.

II

On November 29, 2022, Recentive sued Fox, alleging infringement of the four patents. Fox moved to dismiss for failure to state a claim on the ground that the patents are ineligible under § 101.

In opposing Fox's motion, Recentive acknowledged that "the concept of preparing network maps[] [had] existed for a long time," and that prior to computers, "networks were preparing these network maps with human beings." Transcript of Motion to Dismiss Hearing at 28:19–29:06, *Recentive Analytics, Inc. v. Fox Corp.*,

---

using the network map to determine for each station (i) the first live event from the first plurality of live events that will be displayed at the first time and (ii) the second live event from the second plurality of live events that will be displayed at the second time.

'811 patent, col. 9 ll. 66–col. 10, ll. 32.

692 F. Supp. 3d 438 (D. Del. 2023) (No. 22-cv-1545), ECF No. 39 ("Transcript"). Recentive also recognized that "the patents do not claim the machine learning technique itself," *id.* at 26:14–15, but instead "claim[] the application of the machine learning technique to the specific context[s]" of event scheduling and network map creation, *id.* at 26:15–21.

Recentive asserted that its patents claim eligible subject matter because they involve "the unique application of machine learning to generate customized algorithms, based on training the machine learning model, that can then be used to automatically create . . . event schedules that are updated in real-time." Plaintiff's Opposition to Defendants' Motion to Dismiss at 2, *Recentive Analytics, Inc. v. Fox Corp.*, 692 F. Supp. 3d 438 (D. Del. 2023) (No. 22-cv-1545), ECF No. 20 ("Opposition Br."). According to Recentive, this includes using iterative training for its machine learning model on "different event parameters and . . . event target features" to "identify relationships" within the data. *Id.* at 9 (alteration in original) (quoting '367 patent, col. 14 ll. 21–23).

Recentive acknowledged that "the way machine learning works is the inputs are defined, the model is trained[;] and then the algorithm is actually updated and improved over time based on the input," Transcript at 26:21–24; that "[t]he process of training the machine learning model[] . . . is required for any machine learning model," Opposition Br. at 16; and that "'using a machine learning technique[]' . . . necessarily includes [an] 'iterative[] training' step," *id.* at 9 (quoting '811 patent, col. 3 ll. 26–28). Recentive characterized its patents as introducing "the application of machine learning models to the unsophisticated, and equally niche, prior art field of generating network maps for broadcasting live events and live event schedules." *Id.* at 1.

The district court granted Fox's motion to dismiss, concluding that the patents were ineligible under the two-step inquiry of *Alice Corporation v. CLS Bank International*, 573 U.S. 208 (2014). The court first found that the asserted claims were "directed to the abstract ideas of producing network maps and event schedules, respectively, using known generic mathematical techniques." *Recentive*, 692 F. Supp. 3d at 451. The court then found at step two of *Alice* that the patents' claims were not directed to an "inventive concept" that would "amount[] to significantly more than a patent upon the [ineligible concept] itself," *id.* at 456 (second alteration in original) (quoting *Alice*, 573 U.S. at 217–18), because the machine learning limitations were no more than "broad, functionally described, well-known techniques" and claimed "only generic and conventional computing devices," *id.* at 457 (footnote omitted). Finally, the district court denied Recentive's request for leave to amend. *See id.* In the district court's view, any amendment to Recentive's complaint would have been futile. *Id.*

Recentive appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review challenges to a district court's dismissal of a complaint for failure to state a claim de novo. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014); *Sands v. McCormick*, 502 F.3d 263, 267 (3d Cir. 2007). We likewise review a district court's determination of patent eligibility under § 101 de novo. *Content Extraction*, 776 F.3d at 1346; *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012).

An invention is patent eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. The Supreme Court has interpreted this language to exclude "[l]aws of nature, natural

phenomena, and abstract ideas" from patent eligibility. *Alice*, 573 U.S. at 216; *Mayo Collab. Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 70 (2012).

Under *Alice*, courts perform a two-step analysis to determine patent eligibility under § 101. "First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217. If the claims are directed to a patent-ineligible concept, we assess the "elements of each claim both individually and 'as an ordered combination'" to determine whether they possess an "inventive concept" that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Id.* at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72).

This case presents a question of first impression: whether claims that do no more than apply established methods of machine learning to a new data environment are patent eligible. We hold that they are not.

I

Under the first step of the *Alice* inquiry, "we 'look at the focus of the claimed advance over the prior art to determine if the claim's character as a whole is directed to excluded subject matter.'" *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1149 (Fed. Cir. 2019) (quoting *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016)). In the context of software patents (which includes machine learning patents), the step-one inquiry determines "whether the claims focus on 'the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an abstract idea for which computers are invoked merely as a tool.'" *Id.* (alteration in original) (quoting *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1303 (Fed. Cir. 2018)).

Considering the focus of the disputed claims, *Alice*, 573 U.S. at 217, it is clear that they are directed to ineligible, abstract subject matter. Recentive has repeatedly conceded that it is not claiming machine learning itself. *See* Appellant's Br. 45; Transcript at 26:14–15. Both sets of patents rely on the use of generic machine learning technology in carrying out the claimed methods for generating event schedules and network maps. *See, e.g.*, '367 patent, col. 6 ll. 1–5, col. 11–12; '811 patent, col. 3, l. 23, col. 5 l. 4. The machine learning technology described in the patents is conventional, as the patents' specifications demonstrate. *See, e.g.*, '367 patent, col. 6 ll. 1–5 (requiring "any suitable machine learning technology . . . such as, for example: a gradient boosted random forest, a regression, a neural network, a decision tree, a support vector machine, a Bayesian network, [or] other type of technique"); '811 patent, col. 3 l. 23 (requiring the application of "any suitable machine learning technique.").[4]

---

[4] The patents additionally employ only generic computing machines and processors. *See, e.g.*, '367 patent, col. 11 ll. 50–62 ("The processes and logic flows described in this specification can be performed by one or more programmable processors executing one or more computer programs to perform actions by operating on input data and generating output . . . . Processors suitable for the execution of a computer program include . . . both general and special purpose microprocessors, and any one or more processors of any kind of digital computer."); '811 patent, col. 5 ll. 4–6 ("FIG. 4 shows an example of a generic computing device 450, which may be used with the techniques described in this disclosure"). As we have explained, "generic steps of implementing and processing calculations with a regular computer do not

The requirements that the machine learning model be "iteratively trained" or dynamically adjusted in the Machine Learning Training patents do not represent a technological improvement. Recentive's own representations about the nature of machine learning vitiate this argument: Iterative training using selected training material and dynamic adjustments based on real-time changes are incident to the very nature of machine learning. *See, e.g.*, Opposition Br. 9 ("[U]sing a machine learning technique[] . . . necessarily includes [an] iterative[] training step . . . ." (internal quotation marks and citation omitted)); Transcript at 26:21–24 ("[T]he way machine learning works is the inputs are defined, the model is trained, and then the algorithm is actually updated and improved over time based on the input").

Recentive argues in its briefs that its application of machine learning is not generic because "Recentive worked out how to make the algorithms function dynamically, so the maps and schedules are automatically customizable and updated with real-time data," Appellant's Reply Br. 2, and because "Recentive's methods unearth 'useful patterns' that had previously been buried in the data, unrecognizable to humans," *id.* (internal citation omitted). But Recentive also admits that the patents do not claim a specific method for "improving the mathematical algorithm or making machine learning better." Oral Arg. at 4:40–4:44.

Even if Recentive had not conceded the lack of a technological improvement, neither the claims nor the specifications describe how such an improvement was

---

change the character of [the claim] from an abstract idea into a practical application." *In re Bd. of Trs. of Leland Stanford Junior Univ.*, 991 F.3d 1245, 1250 (Fed. Cir. 2021).

accomplished. That is, the claims do not delineate steps through which the machine learning technology achieves an improvement. *See, e.g.*, *IBM v. Zillow Grp., Inc.*, 50 F.4th 1371, 1381 (Fed. Cir. 2022) (holding abstract a claim that "d[id] not sufficiently describe how to achieve [its stated] results in a non-abstract way," because "[s]uch functional claim language, without more, is insufficient for patentability under our law." (quoting *Two-Way Media Ltd v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017))); *see also Intell. Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1342 (Fed. Cir. 2017) (similar); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (similar). "[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." *Pfaff v. Wells Elecs.*, 525 U.S. 55, 63 (1998); *Sanho Corp. v. Kaijet Tech. Int'l Ltd.*, 108 F.4th 1376, 1382 (Fed. Cir. 2024). Allowing a claim that functionally describes a mere concept without disclosing how to implement that concept risks defeating the very purpose of the patent system. In this respect, the patents' claims are materially different from those in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), and *Koninklijke*, the cases on which Recentive relies.

Instead of disclosing "a specific implementation of a solution to a problem in the software arts," *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016), or "a specific means or method that solves a problem in an existing technological process," *Koninklijke*, 942 F.3d at 1150, the only thing the claims disclose about the use of machine learning is that machine learning is used in a new environment. This new environment is event scheduling and the creation of network maps.

As Recentive acknowledges, before the introduction of machine learning, event planners looked to what the

Machine Learning Training patents describe as "event parameters" such as prior ticket sales, weather forecasts, and other data to determine when and where to schedule a particular event or series of events. *See* Appellant's Br. 4 (describing prior methods as "entirely manual, static[,] and incapable of responding to changing conditions" (quoting '811 patent, col. 1 l. 25)). The patents recognize this. *See, e.g.*, '367 patent, col. 1 ll. 13–26. The same goes for the creation of network maps, which have been "manual[ly]" created by humans to determine "which content will be displayed on which channel at a certain time." '811 patent, col. 1 ll. 16–17, 25.

We see no merit to Recentive's argument that its patents are eligible because they apply machine learning to this new field of use. We have long recognized that "[a]n abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment." *Intell. Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1366 (Fed. Cir. 2015); *see also Alice*, 573 U.S. at 222; *Parker v. Flook*, 437 U.S. 584, 593 (1978); *Stanford*, 989 F.3d at 1373 (rejecting argument that a claim was not abstract where patentee contended "the specific application of the steps [was] novel and enable[d] scientists to ascertain more haplotype information than was previously possible").

We have also held the application of existing technology to a novel database does not create patent eligibility. *See, e.g.*, *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018); *Elec. Power*, 830 F.3d at 1353 ("[W]e have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas." (citing *Internet Pats. Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1349 (Fed. Cir. 2015); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015); *Content Extraction*, 776 F.3d at 1347; *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*,

758 F.3d 1344, 1351 (Fed. Cir. 2014); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011))). Stated differently, patents may be directed to abstract ideas where they disclose the use of an "already available [technology], with [its] already available basic functions, to use as [a] tool[] in executing the claimed process." *SAP Am.*, 898 F.3d at 1169–70. We think those cases are equally applicable in the machine learning context. Recentive's argument that its patents are eligible simply because they introduce machine learning techniques to the fields of event planning and creating network maps directly conflicts with our § 101 jurisprudence.

Finally, the claimed methods are not rendered patent eligible by the fact that (using existing machine learning technology) they perform a task previously undertaken by humans with greater speed and efficiency than could previously be achieved. We have consistently held, in the context of computer-assisted methods, that such claims are not made patent eligible under § 101 simply because they speed up human activity. *See, e.g.*, *Content Extraction*, 776 F.3d at 1347; *DealerTrack*, 674 F.3d at 1333. Whether the issue is raised at step one or step two, the increased speed and efficiency resulting from use of computers (with no improved computer techniques) do not themselves create eligibility. *See, e.g.*, *Trinity Info Media, LLC v. Covalent, Inc.*, 72 F.4th 1355, 1363 (Fed. Cir. 2023) (rejecting argument that "humans could not mentally engage in the 'same claimed process' because they could not perform 'nanosecond comparisons' and aggregate 'result values with huge numbers of polls and members'") (internal citation omitted); *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1365 (Fed. Cir. 2020) (holding claims abstract where "[t]he only improvements identified in the specification are generic speed and efficiency improvements inherent in applying the use of a computer to any task"); *compare McRo*, 837 F.3d at 1314–

16 (finding eligibility of claims to use specific computer techniques different from those humans use on their own to produce natural-seeming lip motion for speech).

The district court correctly concluded that the Machine Learning Training and Network Map patents are directed to abstract ideas at step one of *Alice*.

II

At *Alice* step two, we "consider the elements of [the] 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." 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79). Transforming the nature of a claim "into a patent-eligible application requires more than simply stating the abstract idea while adding the words 'apply it.'" *Trinity*, 72 F.4th at 1365 (quoting *Alice*, 573 U.S. at 221); *see also SAP Am.*, 898 F.3d at 1167. "[T]he claim must include 'an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application.'" *Trinity*, 72 F.4th at 1365 (quoting *Alice*, 573 U.S. at 221); *Broadband iTV, Inc. v. Amazon.Com, Inc.*, 113 F.4th 1359, 1370 (Fed. Cir. 2024) ("[W]e must determine whether the claims include 'an element or combination of elements' that transforms the claims into something 'significantly more' than a claim on the patent-ineligible concept itself." (quoting *Alice*, 573 U.S. at 217–18)).

Recentive claims that the inventive concept in its patents is "using machine learning to dynamically generate optimized maps and schedules based on real-time data and update them based on changing conditions." Appellant's Br. 44. As the district court correctly recognized, *see Recentive*, 692 F. Supp. 3d at 456, this is no more than claiming the abstract idea itself. Such a position plainly fails to identify anything in the claims that would "'transform' the claimed abstract idea into a patent-eligible

application." *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 71).

In short, we perceive nothing in the claims, whether considered individually or in their ordered combination, that would transform the Machine Learning Training and Network Map patents into something "significantly more" than the abstract idea of generating event schedules and network maps through the application of machine learning. *See SAP Am.*, 898 F.3d at 1169–70; *Broadband iTV*, 113 F.4th at 1372. Recentive has also failed to identify any allegation in its complaint that would suffice to plausibly allege an inventive concept to defeat Fox's motion to dismiss. *Trinity*, 72 F.4th at 1365.

The district court did not err in concluding that Recentive's claims fail to satisfy step two of the *Alice* inquiry.

III

We additionally reject Recentive's argument that the district court should have granted it leave to amend, a determination that is committed to the sound discretion of the district court. *See Celgene Corp. v. Mylan Pharms., Inc.*, 17 F.4th 1111, 1130 (Fed. Cir. 2021); *In re Allergan ERISA Litig.*, 975 F.3d 348, 356 n.13 (3d Cir. 2020). Here, the court determined further amendment would be futile. *See Recentive*, 692 F. Supp. 3d at 457. Recentive failed to propose any amendments or identify any factual issues that would alter the § 101 analysis. In light of this failure and our holding with respect to the ineligibility of Recentive's patents, we discern no error in the district court's conclusion.[5]

---

[5] Recentive additionally suggests that the district court erred by resolving claim-construction disputes at

CONCLUSION

Machine learning is a burgeoning and increasingly important field and may lead to patent-eligible improvements in technology. Today, we hold only that patents that do no more than claim the application of generic machine learning to new data environments, without disclosing improvements to the machine learning models to be applied, are patent ineligible under § 101.

AFFIRMED

---

the pleading stage. We are not convinced. The district court correctly recognized that "[d]ismissal is appropriate" where, as here, "a plaintiff has failed to identify claim terms requiring a construction that could affect the patent-ineligibility analysis." *Recentive*, 692 F. Supp. 3d at 448; *Trinity*, 72 F.4th at 1360–61 ("[A] patentee must propose a specific claim construction or identify specific facts that need development and explain why those circumstances must be resolved before the scope of the claims can be understood for § 101 purposes.").