



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/287,315	10/08/2008	Eliot Leonard Wegbreit	PA1006US	8159
80641	7590	03/29/2018	EXAMINER	
Gard & Kaslow LLP 4 Main Street, Suite 20 Los Altos, CA 94022			WERNER, BRIAN P	
			ART UNIT	PAPER NUMBER
			2665	
			MAIL DATE	DELIVERY MODE
			03/29/2018	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ELIOT LEONARD WEGBREIT and GREGORY D. HAGER

Appeal 2017-007321
Application 12/287,315¹
Technology Center 2600

Before CARL W. WHITEHEAD JR., HUNG H. BUI, and
AMBER L. HAGY, *Administrative Patent Judges*.

BUI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner’s final rejection of claims 1–19, 23, and 34–40,² which are all the claims pending in this appeal. Claims 20–22 and 24–33 have been withdrawn due a Restriction Requirement. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.³

¹ According to Appellants, the real party of interest is Strider Labs, Inc.

² Claims 2–12, 14, 17, and 19 have been conditionally allowed if rewritten in independent form including all limitations of base claim 1 and any intervening claims. Final Act. 13.

³ Our Decision refers to Appellants’ Reply Brief filed April 10, 2017 (“Reply Br.”) and Appeal Brief filed January 4, 2017 (“App. Br.”); Examiner’s Answer mailed February 8, 2017 (“Ans.”); Final Office Action mailed May 6, 2016 (“Final Act.”); and original Specification filed October 8, 2008 (“Spec.”).

STATEMENT OF THE CASE

Appellants' Invention

Appellants' invention relates to constructing a 3D scene model from an image of a scene. Spec. ¶ 1; Abstract.

Claims 1, 23, and 34–40 are independent. Claim 1 is illustrative of the claimed subject matter, as reproduced below:

1. A method for computing a 3D scene model comprising 3D object models and representing a scene, based upon a prior 3D scene model, the method comprising the steps of:

(a) acquiring, by a camera, an image of the scene;
(b) initializing, by a processor, the 3D scene model to the prior 3D scene model; and
(c) modifying the 3D scene model to be consistent with the image, by:

(i) comparing, by the processor, data of the image with objects of the 3D scene model, resulting in associated data and unassociated data;

(ii) using, by the processor, the unassociated data to compute new 3D object models that are not in the prior 3D scene model and adding the new 3D object models to the 3D scene model; and

(iii) using, by the processor, the associated data to detect 3D object models in the prior 3D scene model that are absent and removing the absent 3D object models from the 3D scene model.

App. Br. 31 (Claims Appx.).

Examiner's Rejection

Claims 1–19, 23, and 34–40 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to patent-ineligible subject matter, i.e., an abstract idea. Final Act. 3–11.

ANALYSIS

Patent eligibility is a question of law that is reviewable *de novo*. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). The Supreme Court has long held that “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014). The “abstract ideas” category embodies the longstanding rule that an idea, by itself, is not patentable. *Alice Corp.*, 134 S. Ct. at 2355 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

In *Alice*, the Supreme Court sets forth an analytical “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas [or mental processes⁴] from those that claim patent-eligible applications of those concepts.” *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79 (2012)). The first step in the analysis is to “determine whether the claims at issue are directed to [one of those] patent-ineligible concept[s].” *Id.* If not, the inquiry ends. *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1346 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016). If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 78–79). In other words, the second step is to

⁴ See *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“Phenomena of nature, though just discovered, *mental processes*, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”). (Emphasis added).

“search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself’”. *Id.* (brackets in original) (quoting *Mayo*, 566 U.S. at 72–73).

In rejecting independent claims 1, 23, and 34–40, and dependent claims 2–19, under 35 U.S.C. § 101, the Examiner finds the claims are directed to an abstract idea of 3D modeling of an image involving modification of a 3D scene model based on an image obtained from a scene.

Final Act. 3. The Examiner also finds:

[t]he Amendment filed on 04/19/1016 adds nothing more than generic or insignificant structures. For example, the amendment to independent claim 1 adds a “camera” to the image acquiring steps, and implementation by a “processor” to the remaining process steps (a) - (c) . . .

The “camera” limitation of claim 1 is direct to “insignificant extrasolution activity” (refer to the third bullet above) in the form of data gathering, and is not enough to convert otherwise ineligible subject matter to something eligible. Simply appending routine structure, “a camera”, to routine data gathering is not “significantly more”...

The “processor” limitation of claim 1 is “no more than a generic computer to perform generic computer functions” (refer to the second bullet above). Simply reciting an otherwise abstract mental determination as being generically performed on a generic computer is not “significantly more”. There is nothing that would improve the functioning of the computer itself, or that would improve another technology or technical field. The computer is not a special purpose machine, having special or unique hardware in any form. The recited computer is generic, and general purpose, and not “significantly more” (*Alice Corp.*, 134 S. Ct. at 2359 (using a computer to obtain data, adjust account balances, and issue automated instructions); *Mayo*, 132

S. Ct. at 1300 (telling a doctor to measure metabolite levels in the blood using any known process).

Final Act. 4–6.

As to the first step of the *Alice* inquiry, Appellants contend the pending claims (which Appellants argue collectively) are not directed to an abstract idea or a mental process that can be performed in the human mind or by a human using a pen and paper; instead, Appellants argue these claims “are sophisticated calculations that require computer or processor assistance” or “are performed by such elements as a processor, a Z-buffer and a camera.” App. Br. 18; *see also* Reply Br. 5.

We are not persuaded by Appellants’ arguments. Contrary to Appellants’ arguments, independent claims 1, 23, and 34–40 are directed to a patent-ineligible abstract concept of 3D modeling of an image involving making modification of a 3D scene model based on an image obtained from a scene. All the steps of Appellants’ claims 1, 23, and 34–40, including, for example: “(i) comparing . . . data of the image with 3D object models of the 3D scene model, resulting in associated data and unassociated data;” “(ii) using . . . the unassociated data to compute new 3D object models that are not in the prior 3D scene model and adding the new 3D object models to the 3D scene model;” and “(iii) using . . . the associated data to detect 3D object models in the prior 3D scene model that are absent and removing the absent 3D object models from the 3D scene model,” are 3D abstractions of an image or an abstract concept that could be performed in the human mind, or by a human using a pen and paper. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1972 (Fed. Cir. 2011). “[M]ental processes— or processes of human thinking—standing alone are not patentable even if

they have practical application.” *In re Comiskey*, 554 F.3d 967, 979 (Fed. Cir. 2009); *see also Gottschalk*, 409 U.S. at 67 (“Phenomena of nature . . . , *mental processes*, and abstract intellectual concepts are not patentable, as they are basic tools of scientific and technological work.” (Emphasis added)). Additionally, mental processes remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *CyberSource*, 654 F.3d at 1375 (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.”). Likewise, attaching the claimed “mental process” to a computer or processor, as Appellants argue (App. Br. 18; Reply Br. 5), does not transform the claimed “mental process” into a patent-eligible subject matter under 35 U.S.C. § 101 unless the computer or processor is required. *See SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010). Appellants have not presented any argument or evidence that the claimed “mental process” must be performed by a computer or processor, as per *SiRF Tech.*

Appellants further advance several patent-eligibility arguments based on (1) *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016); (2) *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); and (3) *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017). App. Br. 24–27; Reply Br. 13–19. For example, Appellants argue “[a]s in *Enfish*, in the present claims general-purpose computer components are not added to fundamental 3D scene practice, or even a known one, but rather are directed to a specific implementation of a solution of a problem in computing a 3D scene.” App. Br. 24. Similarly, Appellants

argue, like *McRO*, the present claims “improve the existing technological process of constructing 3D scene models, such that the performance of a function previously performable by a computer is an ‘improvement in computer-related technology.’” App. Br. 26; Reply Br. 13–14. Likewise, Appellants argue, like *Thales*, “claims in the present application recite the use of conventional equipment in a non-conventional, new and non-obvious way.” Reply Br. 17–19.

We are unpersuaded. Appellants’ claims 1, 23, and 34–40, when considered in light of Appellants’ Specification, are directed to the abstract idea of 3D modeling of an image involving (1) mental processes under *CyberSource*, 654 F.3d at 1375, and/or (2) data manipulation or organization through mathematical correlations, which is similar to the computing formula discussed in *Parker v. Flook*, 437 U.S. 584 (1978), and the Arrhenius formula in *Diamond v. Diehr*, 450 U.S. 175 (1981).

Information as such is intangible, and data analysis and algorithms are abstract ideas. See, e.g., *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 451 n.12 (2007); *Alice*, 134 S. Ct. at 2355; *Flook*, 437 U.S. at 589, 594–95 (“Reasoning that an algorithm, or mathematical formula, is like a law of nature, *Benson* applied the established rule that a law of nature cannot be the subject of a patent.”); *Gottschalk*, 409 U.S. at 71–72. Similarly, information collection and analysis, including when limited to particular content, is within the realm of abstract ideas. See, e.g., *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1349 (Fed. Cir. 2015); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014); *CyberSource*, 654 F.3d at 1370. That is, “[w]ithout additional limitations, a process that employs mathematical algorithms to manipulate existing

information to generate additional information is not patent eligible.” *Digitech*, 758 F.3d at 1349–51 (“Data in its ethereal, non-physical form is simply information that does not fall under any of the categories of eligible subject matter under section 101.”).

In fact, none of the steps recited in claims 1, 23, and 34–40 requires, and nowhere in Appellants’ Specification is there any description or explanation or evidence as to how 3D scene modeling and data manipulation steps are intended to provide, any of: (1) “a specific improvement to the way computers operate,” as explained in *Enfish*, 822 F.3d at 1336; (2) “a process specifically designed to achieve an improved technological result in conventional industry practice,” as explained in *McRO*, 837 F.3d at 1315; or (3) “a non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame,” as explained in *Thales*, 850 F.3d at 1349. Likewise, Appellants do not present evidence to establish that claims 1, 23, and 34–40 recite a specific technological improvement to computers. *See Enfish*, 822 F.3d at 1336.

As to the second step of the *Alice* inquiry, Appellants contend claims 1, 23, and 34–40 describe “an *improvement to another technology or technical field*, i.e., other less reliable ways of constructing a 3D scene model, and *adds specific limitations other than what is well-understood, routine and conventional* in the field.” App. Br. 19.

We disagree with Appellants and adopt the Examiner’s findings on pages 2–9 of the Answer. We find the additional limitations, taken individually and as a whole in the ordered combination, do not add significantly more to the abstract idea of 3D scene modeling and data organization through mathematical relationships or transform the abstract

idea into a patent-eligible application. *Alice*, 134 S. Ct. at 2357.

Particularly, claims 1, 23, and 34–40 recite well-understood, routine, and conventional elements (i.e., processor, buffer, and camera) that enable the creation of a 3D scene model using a “generic computer to perform generic computer functions” that are well-understood, routine, and conventional. Final Act. 5–6; *see also* Ans. 4–7.

As recognized by the Supreme Court, “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *See Alice*, 134 S. Ct. at 2359 (concluding claims “simply instruct[ing] the practitioner to implement the abstract idea of intermediated settlement on a generic computer” not patent eligible). Likewise, “the use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter.” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (citing *DDR Holdings, LLC, v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014)); *see also Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344–45 (Fed. Cir. 2013) (claims reciting “generalized software components arranged to implement an abstract concept [of generating insurance-policy-related tasks based on rules to be completed upon the occurrence of an event] on a computer” are not patent eligible); *Dealertrack*, 674 F.3d at 1333–34 (“Simply adding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible.”).

As recognized by the Federal Circuit in *Ultramerical Inc. v. Hulu, LLC*, 772 F.3d 709, 714 (Fed. Cir. 2014) (quoting *Bilski v. Kappos*, 561 U.S.

at 594), the “machine-or-transformation” test can provide a “‘useful clue’ in the second step of the *Alice* framework.” However, Appellants’ claims 1, 23, and 34–40 are not sufficiently tied to any machine. Nor do any of the recited steps of Appellants’ claims 1, 23, and 34–40 transform “a particular article into a different state or thing.” *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008), *aff’d*, *Bilski v. Kappos*, 561 U.S. 593 (2010). According to *In re Bilski*, the transformation (1) must involve an underlying article from one state to a different state or thing, and (2) must be central to the purpose of Appellants’ claimed process. *Id.*

Appellants argue, like *Arrhythmia Research Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1059 (Fed. Cir. 1992), claims 1, 23, and 34–40 “transform[] a particular signal, i.e., image data, to create different signal that can be visually interpreted, i.e., 3D scene model with 3D object models contained within it that represent objects in the real world.” App. Br. 28; Reply Br. 8. We do not agree. As correctly recognized by the Examiner, the claimed “image data” is not “‘transformed’ in to a different state, but is rather matched, processed, and organized, without any application of the data.” Ans. 8.

Because Appellants’ independent claims 1, 23, and 34–40 are directed to a patent-ineligible abstract concept and do not recite something “significantly more” under the second prong of the *Alice* analysis, we sustain the Examiner’s rejection of those claims under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter in light of *Alice* and its progeny. We also sustain on the same grounds the rejection of dependent claims 2–19, which are argued collectively with the independent claims.

CONCLUSION

On the record before us, we conclude Appellants have not demonstrated the Examiner erred in rejecting claims 1–19, 23, and 34–40 under 35 U.S.C. § 101.

DECISION

As such, we AFFIRM the Examiner’s final rejection of claims 1–19, 23, and 34–40 under 35 U.S.C. § 101.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED