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.
15/254,547	09/01/2016	Vivek Tyagi	MM02095/2100.003400	9493

138868 7590 03/23/2020

Lenovo/Motorola Mobility
c/o Amerson Law Firm, PLLC
2450 Fondren Road, Suite 260
Houston, TX 77063

EXAMINER	
TON, DAVID L	

ART UNIT	PAPER NUMBER
2654	

NOTIFICATION DATE	DELIVERY MODE
03/23/2020	ELECTRONIC

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing.mobility@motorola.com
uspto@amersoniplaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VIVEK TYAGI and SUDHIR VISSA

Appeal 2019-001573
Application 15/254,547
Technology Center 2600

Before MAHSHID D. SAADAT, ST. JOHN COURTENAY III, and STEVEN M. AMUNDSON, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–7 and 12–18.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

---

[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies Motorola Mobility LLC as the real party in interest. Appeal Br. 2.

[2] The Examiner withdrew the final rejection of claims 9–11 and 20–22 under § 101. *See* Ans. 6. In addition, the Examiner noted that claims 8 and 19 "are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." Final Act. 5.

STATEMENT OF THE CASE

Introduction

Appellant's disclosure is directed to "techniques for monitoring user head motion using motion data collected by a sensor in a headset to determine user preferences regarding the audio selection being played." *See* Spec. ¶ 8. Claim 1 is illustrative of the invention and reads as follows:

> 1. A method comprising:
>
> employing a first motion sensor in a headset to generate headset motion data;
>
> receiving the headset motion data over a headset interface of a device while playing an audio selection on the device; and
>
> generating a preference indicator for the audio selection based on the headset motion data, the preference indicator corresponding to one of a like classification or a dislike classification of the audio selection.

Appeal Br. A-1 (Claims App.).

The Examiner's Rejection

Claims 1–7 and 12–18 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Final Act. 2–4.

ANALYSIS

SECTION 101 REJECTION

We have reviewed the Examiner's rejection in light of Appellant's contentions and the evidence of record. We concur with Appellant's contention that the Examiner erred.

Rejection and Arguments

The Examiner finds "the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea)

without significantly more." Final Act. 2. The Examiner specifically finds the claimed subject matter is "similar to processes found abstract by the courts such as of obtaining/receiving a headset motion data, analyzing the headset motion data, and generating an indicator data in 'Electric Power Group'[3]." *Id.* The Examiner further finds:

> Claim 1 does not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claim includes additional elements such as: a first motion sensor, a headset interface, and an audio playback device are recited at a high level of generality, provide conventional electronic device functions of collecting and delivering data (headset motion data) and playing back audio signal; and do not add meaningful limits to practicing recited the abstract idea. Taking these additional elements as an order [sic] combination adds nothing that is not already present when the elements are taken individually. Therefore, the claim does not amount significantly more than the recited abstract idea.

Final Act. 2–3.

Appellant contends "claims 1 and 12 are not merely directed to manipulating data, but rather to a technique for generating a user input based on headset motion data" by using a physical motion sensor in the headset "to generate the user input indicative of the user's preference," which is directly tied to the hardware of the device, not to the collection of abstract data. Appeal Br. 3. According to Appellant, the "user intent provides an alternative input mechanism to the device for indicating preferences, thereby improving the operation of the device," which unlike the claims in *Electric Power*, "do require a new technique for analyzing the collected data in that the headset motion data is analyzed to determine a preference indicator,

[3] *Elec. Power Grp., LLC, v. Alstom*, 830 F.3d 1350 (Fed. Cir. 2016).

which represents a new type of analysis that generates a user input to the device." Appeal Br. 4–5. Moreover, Appellant argues "the collection of headset motion data, and the analysis thereof to generate a preference indicator is not a conventional use of a motion sensor" and "amounts to more than just an abstract idea." Appeal Br. 5.

Legal Principles

Section 101 of the Patent Act provides "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (internal quotation marks and citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and, thus, patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (citation omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

In January 2019, the PTO published revised guidance on the application of § 101. USPTO, 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance"). Under the Guidance, we first look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of

> organizing human activity such as a fundamental economic practice, or mental processes) (Step 2A, Prong 1); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE ("MPEP") § 2106.05(a)–(c), (e)–(h)) (9th ed. rev. 08.2017, Jan. 2018) (Step 2A, Prong 2).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. (Step 2B.)

See Guidance, 84 Fed. Reg. at 54–56.

Discussion

The Judicial Exception – Abstract Idea (Step 2A, Prong One)

Under the Guidance, we begin our analysis by first considering whether the claims recite any judicial exceptions, including certain groupings of abstract ideas, in particular: (a) mathematical concepts, (b) mental steps, and (c) certain methods of organizing human activities. Turning to independent claim 1, we observe the claim recites, *inter alia*, a method including the following steps:

> **employing** a first motion sensor in a headset to generate headset motion data;
>
> **receiving** the headset motion data over a headset interface of a device while playing an audio selection on the device; and
>
> **generating a preference indicator** for the audio selection based on the headset motion data, the preference

> indicator corresponding to one of a like classification or a dislike classification of the audio selection.

Claim 1 (emphases added).

Thus, we conclude the aforementioned *employing a first motion sensor, receiving the headset motion data,* and *generating a preference indicator for the audio selection* functions could be performed alternatively as mental processes, i.e., concepts performed in the human mind or using pen and paper (including an observation, evaluation, judgment, and opinion) under the Guidance, 84 Fed. Reg. at 52.[4] Contrary to Appellant's assertion that the claim is not directed to collecting and manipulating data and "is ***directly tied to the hardware of the device***," (Appeal Br. 3), a person can perform the above-mentioned steps of claim 1 by using their minds (or pen and paper) in the claimed manner. For example, a person can observe and obtain the user preference and categorize the audio selection as a "like" or "dislike" by memorizing or writing down the user's movements in response to each audio selection, using their minds or pen and paper.

[4] If a method can be performed by human thought alone, or by a human using pen and paper, it is merely an abstract idea and is not patent eligible under § 101. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011); *see also Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (Fed. Cir. 2016) ("While the Supreme Court has altered the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice,* we continue to 'treat[ ] analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category'" (brackets in original) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016)); *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*.").

We note that independent claim 12 recites similar language of commensurate scope to the functions recited in claim 1 that we conclude also falls into the abstract-idea category of a mental process including the abstract-idea subcategories of an observation, evaluation, judgment, and opinion. *Id.* Claim 12 recites the additional non-abstract generic limitations of a processor, in addition to the headset and the headset interface of claim 1 for performing the functions recited in claim 1.

We also note the recited "generating a preference indicator for the audio selection" function of claim 1, and similar language recited in independent claim 12 merely access and manipulate information. Courts have found such data-gathering steps to be insignificant extra-solution activity. *See, e.g.*, *In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (en banc), *aff'd sub nom. Bilski v. Kappos, 561 U.S. 593* (2010) (characterizing data gathering steps as insignificant extra-solution activity).

Integration of the Judicial Exception into a Practical Application (Step 2A, Prong One)

Although under *Step 2A, Prong One*, claim 1 recites an abstract idea based on these mental processes, we, nevertheless, must still determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea.

Therefore, we proceed to *Step 2A, Prong 2* of the Guidance to determine whether additional elements of claim 1 integrate an abstract idea, such as mental processes, into a practical application. Such additional elements may reflect an improvement to a technology or technical field. *See* Guidance, 84 Fed. Reg. at 55. Here we look to see if, for example, (i) any

additional elements of the claims reflects an improvement in the functioning of a computer or to another technological field, (ii) an application of the judicial exception with, or by use of, a particular machine, (iii) a transformation or reduction of a particular article to a different state or thing, or (iv) a use of the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment. *See* MPEP § 2106.05(a)–(c), (e)–(h).

We determine the combination of additional elements of claim 1 integrate the abstract idea into a practical application, because those elements ("receiving the headset motion data" and "generating a preference indicator for the audio selection based on the headset motion data") reflect specific technological improvements. *See* claim 1. In fact, the recited elements allow obtaining the user preference data automatically through the headset interface in the form of motion data, which indicates how much the user likes or dislikes the audio selection. The recited elements include automatically obtaining the user preferences with respect to an audio selection based on the headset motion data and how the user reacts and moves in response to the audio content, which provides a specific improvement over prior systems, resulting in an improved user interface for electronic audio devices. The claimed functions present a solution that exists in the type and arrangement of the information to be collected without requiring the user to take any action to provide feedback, which is rooted in computer technology. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (holding the claims satisfy *Alice* step two because "the claimed solution is necessarily rooted in computer technology

in order to overcome a problem specifically arising in the realm of computer networks").

Appellant's Specification supports our determination by describing the prior art problem associated with registering the user preferences wherein "the user typically needs to physically interact with the mobile device to press a 'like' or 'dislike' icon on the display," which "interrupts the music experience and might require the user to physically retrieve the device from a distant or stowed location" discouraging the user from "designating preferences regarding audio selections in some situations to avoid disrupting the experience, resulting in missed data points." *See* Spec. ¶ 2. Appellant's disclosure presents a solution by describing how the user's head motion in response to the audio selection is captured by a motion sensor in the headset and used to determine the user preferences. Appellant's Specification explains the solution as stated below:

> Figures 1-2 illustrate example techniques for monitoring user head motion using motion data collected by a sensor in a headset to determine user preferences regarding the audio selection being played. While a headset interface of the device is engaged, the device monitors the headset motion data to identify preference indicators for the audio selection without requiring the user to manually interact with the device to designate the preference indicator. For example, if the user is bobbing her head in a manner that matches the rhythm of the audio selection, it is likely that the user has a positive preference regarding the audio selection. The motion data may also be used to automatically generate entries in a library of preference classifications for use by the device or other devices to classify audio selections.

Spec. ¶ 8; *see also id.* ¶ 13. Such combination of determining the user reaction to the audio selection addresses the stated missed data points.

Because the additional elements of claim 1 integrate an abstract idea, such as mental processes, into a practical application, we determine claim 1 is not directed to an abstract idea. *See* Guidance, Step 2A, Prong 2. For similar reasons, independent claim 12, as well as the remaining dependent claims, integrate the mental processes into a practical application, and are not directed to an abstract idea.

Therefore, we do not sustain the rejection of claims 1–7 and 12–18 under 35 U.S.C. § 101.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–7, 12–18	101	Eligibility		1–7, 12–18

REVERSED