



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

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, DELIVERY MODE. Includes application details for Corey James Centen and examiner information.

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):

physio\_control\_docketing@cardinal-ip.com
IPMail.MedSurgGroup@stryker.com
patents@lanepowell.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* COREY JAMES CENTEN<sup>1</sup>

---

Appeal 2017-007184  
Application 12/841,952  
Technology Center 3700

---

Before ERIC B. GRIMES, CHRISTOPHER G. PAULRAJ, and  
RYAN H. FLAX, *Administrative Patent Judges*.

FLAX, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) involving claims directed to a device for monitoring chest compressions during the administration of cardiopulmonary resuscitation (CPR) to a patient. Claims 1, 5, 26–28, 30–33, 36, 38, 39, and 46–50 are on appeal as rejected under 35 U.S.C. § 101. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

---

<sup>1</sup> Appellant identifies the Real Party in Interest as “Physio-Control, Inc.” Appeal Br. 3.

### STATEMENT OF THE CASE

Independent claim 1, reproduced below, is representative:

1. A device for monitoring chest compressions during the administration of cardiopulmonary resuscitation to a patient, comprising:

a three-dimensional image optical sensor\_attached [*sic*] to a wrist band configured to be worn around a wrist of a rescuer administering cardiopulmonary resuscitation to the patient, the optical sensor configured to sense a distance, for a plurality of pixels of the optical sensor, between the optical sensor and an object in an environment surrounding the optical sensor, the distance sensed throughout motion of a chest compression administered by the rescuer during cardiopulmonary resuscitation and the object in the environment monitored for changes that are related to the depth of the administered chest compressions, the optical sensor positioned to move with the motion of the chest compression;

processing circuitry configured to receive the sensed distance from optical sensor and further configured to:

generate a depth map from the sensed distance between the optical sensor and the object in the environment of the sensor; and

extract depth information of the chest compression based on the depth map.

Br. 26 (Claims App'x).

The following rejection is appealed:

Claims 1, 5, 26–28, 30–33, 36, 38, 39, and 46–50 stand rejected under 35 U.S.C. § 101 as directed to an abstract idea without significantly more.

Non-Final Action 3.

### DISCUSSION

“[T]he examiner bears the initial burden, on review of the prior art *or on any other ground*, of presenting a *prima facie* case of unpatentability. If

that burden is met, the burden of coming forward with evidence or argument shifts to the applicant.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (emphasis added).

“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.” *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 566 U.S. 66, 71 (2012) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Claims directed to *nothing more* than abstract ideas (such as mathematical algorithms), natural phenomena, and laws of nature are not eligible for patent protection. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981); accord MPEP § 2106 (II) (discussing *Diehr*); *see also Parker v. Flook*, 437 U.S. 584, 592–94 (1978) (if, once the mathematical algorithm is removed from consideration, nothing patentable remains, the claims are not patent-eligible).

In analyzing patent-eligibility questions under 35 U.S.C. § 101, the Supreme Court instructs us to “first determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014). If they are, we then move to a second step and “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

The entirety of the Examiner's patent-ineligibility rejection and rationale in support thereof is set forth on page 3 of the Non-Final Office Action, as follows:

Claims 1, 5, 26-28, 30-33, 36, 38, 39, and 46-50 are rejected under 35 U.S.C. 101 because 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. Claim 1 is directed to the abstract idea of generating a depth map of compressions within the processing circuitry. The claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because they are amount to [sic] known structures in the art. The Office believes that while amending the claim to actually output the compression depth information as feedback to the user would overcome the rejection.

The Examiner concluded in the Non-Final Office Action that "generating a depth map of [CPR] compressions" is an abstract idea. Non-Final Action 3. The Examiner went into some greater detail in the Answer, determining that this amounts to mathematical operations and concluding that mathematical relationships are abstract ideas. Answer 3. In the Non-Final Office Action, the Examiner concluded that significantly more than such an abstract idea was not added by the other claim elements so as to confer patent-eligibility because they were "known structures in the art." Non-Final Action 3. The Examiner expanded on this in the Answer, but without adding evidence, stating "[t]he remaining limitations describe an optical device for collecting distance data and are well-known structures in the art (i.e. well understood or conventional structures)." Answer 3; *see also id.* at 4-9 (further addressing this issue without evidence).

Appellant argues:

(1) the Examiner's § 101 rejection failed to meet the Office's burden of proof; (2) the Examiner's § 101 rejection improperly combined the § 101 legal standard with an obviousness analysis under § 103; (3) Appellant's claims do not recite an abstract idea; and (4) if Appellant's claims were to be found to recite an abstract idea, Appellant respectfully concludes that they recite significantly more than the abstract idea.

Br. 11. These arguments contended that the Examiner did not show that the Supreme Court or the Federal Circuit has found similarly claimed subject matter to be directed to an abstract idea and that the claims are not directed to an abstract idea; that the Examiner did not evaluate the claim(s) as a whole under the two-step *Alice* analysis; that the Examiner's determination that claimed structural elements were well-understood, routine, and conventional (in their use or function) was not supported and amounted only to a conclusory obviousness analysis because something might be "known" in the prior art, but not "conventional"; and that, if the claims are directed to an abstract idea, the non-abstract-idea claim elements amount to significantly more than a mere abstract idea so as to confer patent-eligibility. *Id.* at 11–24.

As recognized by the Supreme Court and the Federal Circuit, "[a]t some level, 'all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.'" *Amdocs (Israel) Ltd. v. Openet Telecom Inc.*, 841 F.3d 1288, 1299 (Fed. Cir. 2016) (quoting *Alice*, 134 S.Ct. at 2354 (quoting *Mayo*, 566 U.S. at 71)) (alterations and emphasis in original). Because of this reality, as instructed by the Supreme Court, "we tread carefully in construing this exclusionary principle lest it swallow all of patent law." *Alice*, 134 S.Ct. at 2354.

Even assuming for the sake of argument that the claims on appeal are “directed to” an abstract idea under the first step of the *Alice* framework as determined by the Examiner, we conclude that the Examiner has not shown that all the additional elements recited in the claims, considered individually and as an ordered combination, were well-understood, routine, and conventional as required under the second step of *Alice*. Regarding the Examiner’s determination that the non-abstract-idea claim elements are merely routine and conventional,

Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination. Whether a particular technology is well-understood, routine, and conventional goes beyond what was simply known in the prior art. The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional.

*Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018).

Here, there is a dispute over whether the claimed “three-dimensional image optical sensor attached to a wrist band . . . configured to sense a distance” and the related “processing circuitry configured [i.e., programmed] to receive the sensed distance . . . generate a map . . . and extract depth information” were well-understood, routine, and conventional to a skilled artisan. The Examiner has provided no evidence that they would have been so-understood. Therefore, we conclude a prima facie case for patent-ineligibility has not been established and we reverse the rejection.

Appeal 2017-007184  
Application 12/841,952

SUMMARY

The rejection of the claims as directed to patent-ineligible subject matter is reversed.

REVERSED